

Ministry of Health of Ukraine
Ministry of Education and Science of Ukraine
Kharkiv National Medical University
V. N. Karazin Kharkiv National University

PSYCHIATRY
AND
NARCOLOGY

Tutorial for foreign medium students of higher medical schools
and interns

**PSYCHIATRY AND NARCOLOGY: підручник для студентів медичних
університетів та лікарів інтернів**

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INTRODUCTION

A doctor of any speciality must know main mental disorders occurring in various diseases, as many patients with these disturbances at first consult general practitioners rather than psychiatrists. The ability to reveal the character of these disorders, devise correct tactics in each case makes it possible to increase efficacy of therapy for these patients.

The manual is to facilitate students' preparation for classes in psychiatry and pursues the aim of optimization in the process of studies. It is written with regard for practical problems which the future doctors will have to solve. The present manual is composed in compliance with the syllabus in psychiatry and narcology worked out by the basic department of the Ministry of Health of Ukraine – the Department of Psychiatry, Narcology, Medical Psychology and Social Work of Kharkov National Medical University. In an intelligible form, the book informs about the main disturbances of the psychic activity, describes signs and syndromes of mental diseases.

Unlike previous ones, this manual elucidates criteria of the current international classification of mental diseases, describes psychopathological syndromes in accordance with these criteria.

The manual “Psychiatry and Narcology” enables future doctors to learn fundamentals in the diagnosis of mental disorders and master psychiatric terms.

In compliance with the requirements of the regulations for the procedure of preparation and publication of the educational and educational-methodical literature for higher medical and pharmaceutical educational establishments with the 3rd–4th levels of accreditation, the objective of the lesson, its contents and test questions are determined for each studied subject. In order to improve successfulness of the students' mastering the knowledge, the manual contains problems for independent preparation which are composed according to the format of test tasks of “Krok-2” licensing examination.

**THE SUBJECT AND TASKS OF PSYCHIATRY AND NARKOLOGY.
ORGANIZATION OF PSYCHIATRIC AID. METHODS OF
EXAMINATION OF MENTAL DISEASE. CLASSIFICATION OF
MENTAL DISEASE. REGISTER MENTAL DISEASE**

Psychiatry is the medical science dealing with the study of diagnosis, etiology, pathogenesis and rate of mental diseases, as well as organization of the psychiatric aid.

Psychiatry (Greek *psyche* – soul, *iatreia* – treatment) = treatment of the soul.

Tasks of psychiatry:

1. Study of the rate, conditions of origination, nosological structure and clinical peculiarities of mental diseases.
2. Study of the etiology and pathogenesis of mental diseases.
3. Treatment and prevention of mental diseases.
4. Social-labour rehabilitation of patients.
5. Labour, forensic and military psychiatric examination.
6. Carrying out of sanitary-educational and psychohygienic measures among the population.

MAIN SECTIONS OF MODERN PSYCHIATRY:

1. General (study and treatment of mental illness)
 2. Pediatric, juvenile
 3. Geriatric
 4. Narcology
 5. Forensic psychiatry
 6. Social psychiatry
 7. Psychotherapy
 8. Psychopharmacotherapy
 9. Sexual pathology
 10. Suicidology
11. Penitentiary psychiatry (It examines the characteristics of mental disorders in people who are in prison, risk factors for committing illegal actions).
12. Transcultural psychiatry (especially comparative studies of psychiatric disorders in people of different nations, cultures and social systems)

HISTORY OF DEVELOPMENT

A brief overview of the history of psychiatry Mental illness exists as long as humanity exists. In the pre-scientific period of the history of medicine prevalent primitive theological understanding of the anomalous behavior of the patients, which is reflected in myths and legends.

The origins of the birth of psychiatry associated with the great physician and philosopher of ancient Greece - Hippocrates, which is rightly considered the founder of scientific medicine.

Claudius Galen studied the brain, the seat of his mind thought, thoughts localized in the heart, the desire - in the liver. Mental illness Galen differentiated between on acute and chronic, related to the first feverish delirium, to the second - melancholy.

The Middle Ages slowed down the development of science. During this period was dominated by the influence of the church on the diabolical obsession of apostasy, of holiness and possessed with a devil, so any violation of the psyche is not assessed as a disease but as a result of voluntary intercourse with the devil.

In the early Middle Ages began to emerge and progressive views on the nature of mental illness. So, the famous Arab scholar Avicenna considered disease infringement of mental activity, and called for their treatment. These views Avicenna implemented in the construction of hospitals for the mentally ill.

At the end of XVII - beginning of XVIII century in connection with the expansion of cities and crowded public authorities ordered the relatives of patients to protect the peace living nearby. In Europe, there are shelters for the mentally ill. The patients were kept in small rooms with stone floors and no furniture, chained to the walls.

In the XVIII century there have been major changes in the organization of mental health care. This reflected the social changes that have occurred in France during the period of the bourgeois revolution.

French psychiatrist Philippe Pinel (1745-1826), the chief doctor psychiatric hospital Bicetre achieved at the National Convention of the right to withdrawal of chains with the mentally ill and went down in history as the "father of modern psychiatry." F. Pinel - founder of psychiatry in France, its main merit is that he was "elevated to the rank of a crazy person of unsound mind". The closest disciple Pinel, Zh.Eskerol, laid the foundation for the scientific and clinical psychiatry, legalized the mandatory medical examination of persons placed in psychiatric institutions. Eskerol initiated the study of progressive paralysis, set of somatic symptoms in the clinic of psychosis, delusions and hallucinations differentiated.

Reforms initiated by Pinel, continued in England Connolly. He was the professor of University of London, which declared the principle of "unconstrained"

mentally ill.

In the middle and second half of the XIX century, psychiatry has made significant progress. The Viennese psychiatrist T. Meinert described amentia, German psychiatrist Karl Wernicke first described alcoholic hallucinosis, introduced the concept of overvalued ideas, pseudohallucinations, hallucinosis, hallucinatory confusion.

At the end of the XIX century, wider development receives symptomatic psychiatry: a systematic delusional psychosis (C. Mangan), circular insanity, catatonia (K. Kahlbaum) hebephrenia (E. Hecker) geboidofreniya (K. Kahlbaum) diznoyya (S.S. Korsakov). This period of world psychiatry is defined as the development of preclinical but two disease entities have been described already in this period: progressive paralysis (AG Bell), alcoholic psychosis polinevrichesky (SS Korsakov). E. Kraepelin stated that mental illness - a natural biological process, having a specific etiology of specific mental and physical symptoms, postmortem basis, and for the typical pre-ordained outcome. He singled out two endogenous mental illness - dementia praecox (demence precose) and manic-depressive psychosis.

In XX century, has spread the teachings of Karl Bonhoeffer exogenous types of reactions in the form of disturbance of consciousness of the effect of exogenous harmful factors (infection, intoxication). In 1911, Swiss psychiatrist E. Bleuler suggested the name schizophrenia disease described Kraepelin. A. Altsgeymer described the histopathology of progressive paralysis, he has allocated a special form of early dementia, named after him. Great influence on the development of mental health in Europe and especially in the United States had the teachings of Freud. The main point of this trend is the recognition of the prevalence of psychiatric unconscious over the conscious. The unconscious, according to Freud, is instinct, primarily sexual, which cause all the psychic activity of man.

ORGANIZATION OF PSYCHIATRIC AID

"The good of the patient - the supreme law" (Salus aergoti suprema lex) - a basic principle which must use all doctors, especially psychiatrists. The significant role of ethics in professional work of the psychiatrist as the nature of his relationship with the patient special, creating a specific moral issues. These issues are determined by the fact that psychiatry has the means of human exposure.

One of the tasks of psychiatry - enhance the social acceptance of the mentally ill, overcoming barriers of bias, exclusion and regulation of social sanctions against the mentally ill. Unlike other medical disciplines, psychiatry applies in respect of certain categories of patients coercion, creating a frightening aura about psychiatry, causing distrust of society and the natural tendency to

protect itself from undue interference in their lives.

The object of psychiatric ethics is to limit the scope of coercion in the provision of mental health care to the limits determined by medical necessity that ensures respect for human rights. Do not use coercive measures in relation to patients who do not pose a threat to themselves or others. patient burdensome to others should not be a prerequisite for the use of coercion. The duration of stay of the patient in the hospital should be determined only by his mental state. Do not delay in hospital patients, as it can cause hospitalism syndrome. It is important that patients are as long as possible socially adapted as continuing to work patients arrive at the hospital less often, and the time spent in hospital is shorter than that of patients who left work.

When the patient returns from the hospital is necessary to consider the conditions in which they live at home. During the patient stays in the hospital doctor should monitor the ratio of staff to the patient, to avoid the possibility of being subjected to inappropriate or disciplinary action. Do not use the restriction of patients unless absolutely necessary. Studies in different countries have shown that while decreasing of disciplinary measures in psychiatric departments, unlimited visits of relatives, provide home vacation, they reduce the number of aggressive and auto-aggressive acts of mental sick patients.

In the relationship doctor - patient is the most attractive model, when the doctor is not a dispassionate functionary and counselor, a friend, a teacher, which helps the patient to choose the only correct decision. However, as an alternative with respect to the individual patient, paternalism ("parent" model), and the partnership is not alternative to psychiatry in general. Specificity and complexity psychiatry is that even with respect to one and the same patient can change these models to each other at different stages of the disease. Therefore, one of the tasks of psychiatric ethics is to establish the optimum relationship between doctor and patient, promoting implementation of the interests of the patient, taking into account the specific clinical situation.

World public care about issues prevent possible abuse in the provision of mental health care. Inhuman attitude towards the mentally ill, unfortunately, there are also today in many countries and cultural regions and political systems. Misuse of psychiatry - is the intentional infliction of moral, physical or other damage to the person by applying to it the medical measures that are not shown and necessary, or by non-use of medical measures that are shown and necessary, based on the state of his mental health.

The main regulations on misuse of psychiatry are Hawaiian Declaration, adopted by the World Psychiatric Association in 1977, and "Principles for the protection of persons suffering from mental illness and improving health in the

field of psychiatry", adopted by the UN General Assembly in 1991. Any abuse of psychiatry your knowledge incompatible with professional ethics.

The psychiatrist can not use his abilities against the health interests, without justification and the need to use medical measures. You can not put a psychiatric diagnosis only based on the divergence of views and opinions. In his work, the psychiatrist should consider only his medical conditions, medical debt and the law. Doctor should be independent in his decisions.

The Law of Psychiatric Aid.

In Ukraine, the Law on Psychiatric Aid was adopted; it regulates the rights of mental patients, the rules for giving them aid, as well as clearly determines indications for hospitalizing patients to psychiatric establishments. The basic clauses of the Law on Psychiatric Aid proceed from the statement that mental patients who are citizens of our country enjoy all the rights declared in the Constitution of Ukraine.

The Law on Psychiatric Aid is based on 10 main principles worked out by the Mental Health Department of the World Health Organization. These principles are as follows:

1. Development of mental health and prevention of mental disorders.

Every person should look after his mental well-being and take measures for eliminating causes of mental disorders.

2. Availability of the basic psychiatric aid.

The psychiatric aid must preserve dignity of the patient, it must be materially accessible, just, be at an accessible distance from the patient's place of living, as well as be given on the voluntary basis.

3. Assessment of the mental health in compliance with the generally accepted international principles.

4. Provision of the psychiatric aid in the least restrictive form.

If it is necessary to use various measures of restriction, one should periodically revise this decision (e.g., every 30 minutes in case of a physical restriction and not more than 4 hours).

5. Self-determination, i.e. receiving of the patient's consent before using any type of interference.

6. The right to receive help in self-determination.

7. Availability of the reassessment procedure.

The decision must satisfy all the legal rules in force at this particular moment. The laws must be open, easily understood and in a clear form. The patient should be informed about his rights. The control over the actual application of the Law on

Mental Health must be exercised by a body which does not depend upon the health care authorities.

Qualification of the people taking a decision.

The people who take a decision concerning the patient must be:

- a. competent;
- b. informed;
- c. independent;
- d. impassive.

Ideally, the body taking a decision should consist of at least 3 persons.

10. Respect of law.

The decision must satisfy all the legal rules in force at this particular moment. The laws must be open, easily understood and in a clear form. The patient should be informed about his rights. The control over the actual application of the Law on Mental Health must be exercised by a body which does not depend upon the health care authorities.

Psychiatric treatment organization are divided into 3 main groups: outpatient, inpatient and social rehabilitation. Outpatient care is mentally ill in psychiatric (neuropsychiatric) dispensaries. Psychiatric clinics serve 9 municipal and regional residents. In addition, at district health centers, district hospitals (in places where there are no clinics) organized psychiatric treatments.

Indications for hospitalization in a psychiatric hospital.

1. The presence of severe mental illness, which can not be treated on an outpatient basis
2. The necessity for permanent dynamic medical supervision for the differential diagnosis and diagnostics.
3. Indications for emergency hospitalization (without the patient's consent) will be regulated by the law on psychiatric care.

Finally, the issue of psychiatric hospitalization only solves a psychiatrist after a personal examination of the patient. If you have doubts about the mental health of the patient's doctor of any specialty is obliged to advise the patient consultation psychiatrist, if there are indications for immediate hospitalization organize challenge teams of specialized mental health care.

Specificity of the organization of psychiatric hospitals. The optimal location of the place of psychiatric hospitals should be considered as a green area, distant from saturated transport routes and industrial plants. It is essential that the hospital area was planted, each department should be allocated places for walking patients (exercise yards).

Departments of psychiatric hospitals is differentiated by gender (male and female) and age (children, teenagers, gerontology) principles. In addition, there are specialized departments: for neurotic patients, forensic psychiatric examination, tuberculosis, infectious disease, emergency department, department for emergency treatment.

In psychiatric hospital also work therapists, dentists, neurologists, gynecologists, surgeons, ophthalmologists, otolaryngologists. Organized diagnostic services: radiological, electrophysiological, laboratory (clinical and biochemical studies), as well as the psychological laboratory. The work organized by administrative - economic staff.

The organization of psychiatric department has a such features. It is necessary to exclude the possibility of leaving the department by patients with aggressive and auto-aggressive tendencies. This explains the specific of closed doors. Every psychiatric department is divided into 2 types of parts: the sanatorium and observation. Children's department of mixed gender. In such department organized classrooms, where children learn, play. Department of neuroses do not a lot of differents from typical neurological departments.

In the departments of forensic psychiatry more stricter regime, than in psychiatric, it is provide by the halp of police.

Since 1975, in our country Narcologikal Service is a separate unit. For outpatient, treatment is provided in narcological dispensary and district narcologikal departments and for inpatient - in narcological hospitals.

METHODS OF EXAMINATION FOR MENTAL PATIENTS.

The main method in examination of mental patients is the clinical-psychopathological one, which is based on a conversation with a patient, observation of his expression and behaviour.

The first acquaintance of the physician with the patient and establishment of an adequate psychological contact between them are of paramount importance. During the conversation the physician is also a subject of study from the patient's side. Mental patients, and patients in general, are very sensitive to manifestations of inattention, rudeness, tactlessness, superiority, falsity, they finely respond to kindness, sympathy, a merciful attitude to themselves from the side of the physician and medical staff.

In case of an inadequate emotional contact of the physician with the patient the latter develops watchfulness, distrust, a wish to hide his feelings with a resultant incorrect interpretation of the diagnostic value of the signs of mental and somatic disorders. Often the patients whose attitude to their state is not critical dissimulate, i.e. deliberately hide their mental disorders.

The physician should be able to listen to the patient, giving him an opportunity to tell about himself as independently as possible. Nevertheless, the conversation can be directed; the physician should skillfully ask questions trying not to induce the patients with them, more frequently ask to describe some or other symptoms with more details rather than to confine himself only to statement of the terms used by the patients, as they often put their own meaning to known terminological designations instead of the generally accepted one. Therefore the physician should ask the patient, "What is it?", "Describe with more details what really you feel."

The physician should put questions in the form understandable for the patient, use only the terms that the patient knows or, if something is not clear for the patient, patiently explain, be an active participant in the dialogue, listen to the patient attentively, not to be distracted for outside matters in the patient's presence. The physician must not emotionally respond to any absurdities heard from the mental patient or seen in his behaviour. In the end of the conversation it is necessary to tell the patient your preliminary opinion about his state in a delicate form.

The scheme of a case report

1. Passport data (information)
2. The patient's complaints
3. The life history (according to the patient)

4. The case history (according to the patient)
5. The objective history (according to the people who know the patient)
6. The patient's state at the moment of examination:
 - a) somatic;
 - b) neurological;
 - c) mental.
7. Conclusions on the basis of the primary examination, the initial syndromological diagnosis.
8. Data of the follow-up and examination of the patient.
9. Differential diagnosis.
10. Making of the final diagnosis.
11. Administration of the treatment.
12. Making of the prognosis and social-labour recommendations.

Laboratory examinations:

- a) clinical analyses of the blood, urine, liquor, etc.;
- b) X-ray examinations;
- c) electrocardiography, electroencephalography, rheoencephalography;
- d) experimental-pathological ones;
- e) neuroimaging methods

A conclusion made on the materials of the primary examination: determination of the psychopathological syndrome, making of the initial diagnosis, administration of urgent medical measures.

Data of the subsequent observation and examination of the patient (laboratory examinations, results of examinations made by other specialists, records from diaries of everyday observation of the patients, etc.).

Making of the differential diagnosis, making of the final nosological and syndromological diagnosis and administration of the treatment.

In order to reveal and specify disorders of mental processes, an experimental-psychological examination is made. The methods of the experimental-psychological examination were studied in the course of the fundamentals of general psychology and medical psychology.

The investigation of attention, fatiguability and memorization is carried on using the proof-reading test, Crepelin's count, counting, finding numbers in Schulte's tables, learning 10 words by heart.

Peculiarities of thinking and intellect are investigated with help of the following tests: repetition of stories, explanation of subjects

of pictures, classification of objects, definition of concepts, explanation of the figurative meaning of proverbs and sayings, Wechsler's test.

Peculiarities of personality are assessed using the Minnesota Multitype Personality Inventory (MMPI), Schmyschek's Inventory, Pathocharacterological Inventory.

The factors traumatizing the psyche and morbid feelings can be revealed by the method of unfinished sentences, with help of the topical aperceptive test (TAT). Luscher's colour test and Taylor's alarm scale help in revealing latent depression.

The medical psychologist gives interpretation of the study results which are only auxiliary material for the physician.

In diagnosing exogenous-organic psychoses, neurophysiological (electroencephalography – EEG, rheoencephalography – REG, echoencephalography – Echo-EG), as well as neurovisualizing (X-ray examination of the skull, computed tomography of the brain) methods of examination are used. For diagnosis and therapy of many mental diseases, analyses of blood, urine and cerebrospinal fluid are used.

Studies of brain structure

Neuroimaging methods include computed tomography, magnetic resonance imaging, magnetic resonance spectroscopy, positron emission tomography, single-photon emission tomography and functional magnetic resonance imaging. The fundamental difference between these methods is that CT and MRI show the structure of the brain, and the rest show a function (blood supply, biochemical processes, receptor activity), that is, physiological activity.

Tomography is a research method by step-by-step scanning of the human body and the subsequent construction of three-dimensional black and white images.

The principle of magnetic resonance imaging is based on the use of a high-frequency electromagnetic field. The MRI image is based on the use of the angular momentum of rotation of electrons or protons with an odd number of atomic elements and their own magnetic field. This allows you to get information about the state and density of living tissue. Thus, a chemical analysis (identification of complex morphological changes) of tissues and organs is carried out.

The principle of computed tomography is based on the use of x-rays. Thus, the physical state of tissues and organs is analyzed. A CT scan will show the density of brain structures in sections from 1 to 10 mm thick with a spatial

resolution of up to 0.3-0.6 mm, mainly in the axial, but possibly in the sagittal and coronary planes.

	CT scan	MRI
principle of operation	low dose x-ray	high frequency electromagnetic field
basically principles	anatomical structure of organs	organ functionality
indications for use	soft tissues, bones, hollow organs, sinuses, orbits, lymphatic system, sinuses, orbits; strokes, consequences of injuries and damage to the head; stones and foreign bodies	diseases of the spinal cord and brain (including tumors, hernias, atrophy, etc.)
contraindications	it is forbidden to conduct CT scans for children and pregnant women, pregnancy, and intolerance to iodine-containing drugs that are used for CT studies with contrast	the presence of metal devices, pacemakers, metal implants (including the middle and inner ear), does not reveal calcifications

Positron emission tomography (PET) is based on the phenomenon of positron emission labeled with a radioisotope substance (most often glucose, labeled water, fluoromethane), distributed in the brain. This is a method of intravital diagnosis of brain processes. A change in neuronal activity, pathways of neuroreceptor ligands, reuptake proteins, drugs can be assumed in the presence of data on changes in isotope accumulation.

PET allows you to evaluate blood flow, functional activity in various parts of the brain (in mesolimbic and limbic schizophrenia), the activity of various receptors (including when taking psychotropic drugs), foci of persistent hypermetabolism in the anterior sections of the cingulate gyrus (obsessive-compulsive syndrome), decreased activity in frontal lobe, prefrontal region and in the cingulate gyrus (infantile autism).

The bones of the skull does not allow us to study the structure of the brain using ultrasound, but ultrasound clinic utilizes a method that determines the position of median brain structures (M-echo). In a normal shift of midline structures is less than 2 mm from the center. Volumetric processes (tumors, cysts, abscesses) cause M-echo shift in the direction opposite lesions.

Psychological methods. There is a huge amount of experimental psychological techniques used in various fields of psychology. The most common psychological analysis was performed to assess the extent and nature of memory disorders and intelligence, identifying pathological characteristics of the patient thinking, personality characteristics.

For the diagnosis of organic brain lesions, the degree of mental retardation using a technique of studying memory, attention and intelligence. In most cases used such characteristic, as the IQ endex to determine intelligence.

Raven's Matrices, using non-verbal character sets and figures, in the location where the person has to detect patterns. The test has small connection with the education of the person. Previous training is also can masked the results.

In clinical practice, physicians often use simplified test problem about estimating the degree of disorder of memory and intelligence. In particular, the sample is used to memorize 10 words (normally stored after the test 3-4 verbal repetitions) or meaningless phrases (memorized after 5-7 reps). Countig by Kraepelin involves subtracting from 100 or 200 of the same number (7 or 17). Violations occur when a memory disorders, as well as the weakening of the intellect. The deterioration of the results, as evidenced by the task about exhaustion. the classification of the objectives of the division of a large number of objects in less than the number of groups. In violation of the capacity for abstraction turns out a large number of small groups. On the damage and intelligence indicating specific interpretation of the content of proverbs and sayings.

Of great importance are methods for estimating harmony and focus thinking in diseases such as schizophrenia, epilepsy and others. Some abnormalities may be detected already when using the samples described above on memory and intelligence. In particular, patients with schizophrenia are often used during the classification unimportant, minor signs. This is particularly evident in the application of methodology "fourth extra" (the subjects were asked to make a group of 3 pieces and explain what 4th object is not included in it). When interpretation of metaphorical meaning of proverbs and sayings with schizophrenia often use non-standard abstract symbolic explanation. Patients with epilepsy usually, on the contrary, there are simple, close to the everyday explanations with

greater attention to detail. At times, patients simply can not exclude any subject ("What superfluous So nothing is too much is not: after all, a chair, and a table and a bed, and a cup - all you need As without them can not be !?!")

Pictograms Method (LS Vygotsky) is trying to memorize 10-15 words and abstract concepts with the help of their image in the picture without the use of letters. Subjects are chosen in ascending order of the degree of abstraction, such a happy holiday, hard work, illness, happiness, love, development, deceit, heroism, hatred, justice, friendship, and others. The relationship that the patient explains, between drawing and depicts the concept. Identify the level of abstraction, naturopathic associations, support to secondary symptoms, emotional attitude to the portrayed subject's concept.

Personality questionnaires suggest multiple choice answers to a number of questions. The subject in this case may deliberately distort the results, simulating the pathology or hiding the existing negative personality traits. Therefore, an important requirement to create tests - the presence of special evaluation scales that exhibit conscious attitude. Influence of the installation of the test the more than obvious purpose of the study, so monothematic questionnaires are considered less reliable (eg, range of reactive and personal anxiety Spielberg). The most commonly used clinical psychologist Eysenck questionnaire, MMPI.

Eysenck test is based on the individual characteristics of the parameters "extraversion-introversion" and the severity of the factor "neuroticism", it consists of 57 questions (24 for each factor and 9 issues of "lie" scale). Each question allows only two possible answers: "Yes" and "No". It is assumed that there are introverts dysthymic symptoms extroverts - hysterical and psychopathic, the degree of manifestation of neuroticism points to the severity of the suffering (neurosis). In patients with schizophrenia, neuroticism lowest level in depressed patients - high. With age, the severity of neuroticism and extraversion decreases. The test is not considered ideal because of the significant impact on the result of the intellectual level of the subject, the proposed scale of lies is imperfect and does not rule out such an effect.

Test MMPI (Minnesota Multiphasic Personality Inventory) in the original version contains 550 statements and suggests an answer in the form of assessments 'true' or 'false'. The result is an estimate of 8 clinical parameters (hypochondriasis, depression, hysteria, psychopathic, paranoid psychasthenia, schizophrenia, hypomania), 2 psychological characteristics (masculinity-femininity and social introversion) and 3 rating scales (false, reliability, correction).

Projective techniques allow us to investigate the identity of the most free, untrammelled imagination and activity of the patient's what some pre-prepared answers. Pictures and questions in these tests differ incompleteness and

uncertainty, which allows you to explore the deep, often unwitting psychological processes. Because these techniques do not suggest answers are ready, possible a greater range of reactions, more "subjective". In this sense, talk to your doctor, who asks the question in the infinitive form, which does not contain the answers foreseen, is endowed with a maximum degree of projective and can provide a wealth of material for the analysis of the patient's personality. The main problems of the use of projective techniques is the difficulty of unambiguous interpretation of the results of different investigators and the complexity of their standardization.

In the method the patient is invited to Rorschach associations that arise from it when looking at the 10 tables with symmetrical polychrome and monochrome images (spots). A detailed formal list of the most common responses. A large number of vivid associations, the perception of motion show high intelligence and activity, attention to detail - about the disorganization of thought (for example, mental illness), related to the colors - an emotional experience, the presence of repetition - a sign of passivity, perseverative thinking.

Thematic Apperception Test (TAT) is based on the stories, compiled by the subject when looking at the cards, which depict people and objects in uncertain proportions and conditions. In total there are 30 cards with pictures and one without images intended for their own fantasies of the subject. Allowed presentation directed questions. Dear, the test shows the basic aspirations, needs, existing conflicts and ways of resolving them.

The test Rosenzweig uses 24 figures, images which require more specific and explicit limitation subject of interest (frustration) - thus possible to evaluate human behavior under stress.

Luscher test does not use any images of anything, but only the human tendency to interpret certain colors. In a simplified version of a technique using a set of 8 colors (gray, blue, green, red, yellow, purple, brown, black). Application projective techniques in clinical practice is limited due to their complexity or (Rorschach, TAT) or an insufficient degree of validity (Lusher test).

The main provisions of the ICD-10

International Classification of Diseases (ICD) developed by the World Health Organization (WHO) in order to unify the diagnostic approach in statistical, scientific and social research. Section of mental illness is entered in the International Classification after the Second World War, the development of its 6 th revision. Currently, there are 10 th revision - ICD-10 (ICD-10), where mental disorders and behavioral disorders account for chapter V (F).

CLASSIFICATION OF MENTAL AND BEHAVIORAL DISORDERS

F0 Organic, including symptomatic, mental disorders

F00 Dementia in Alzheimer's disease

F01 Vascular dementia

F02 Dementia in the diseases qualified in other sections (in Pick's, Creutzfeldt-Jacob, Huntington's, Parkinson's diseases caused by the human immunodeficiency virus (HIV))

F04 Organic amnesic syndrome, not caused by alcohol or other psychoactive substances

F05 Delirium, not caused by alcohol or other psychoactive substances

F06 Other mental disorders resulting from an injury or dysfunction of the brain, or caused by a physical disease (hallucinoses, catatonic disturbance, delirious disturbance, affective disturbances, anxious disturbance, dissociative disturbances, asthenic disturbances)

F07 Disorders of the personality and behaviour caused by a disease, injury and dysfunction of the brain

F1 Psychic and behavioural disorders caused by taking of psychoactive substances (alcohol, opioids, cannabinoids, sedative or soporific substances, cocaine, other stimulants, including caffeine, hallucinogens, tobacco, volatile solvents)

F2 Schizophrenia, schizotypal and delirious disorders

F20 Schizophrenia (paranoid, hebephrenic, catatonic, postschizophrenic depression, residual, simple)

F21 Schizotypal disorder

F23 Acute and transitory delirious disorders

F24 Induced delirious disorder

F25 Schizoaffective disorders

F3 Affective disorders of mood

F30 Maniacal episode

F31 Bipolar affective disorder

F32 Depressive episode

F33 Recurrent depressive derangement

F34 Chronic (affective) disorders of mood (cyclothymia, dysthymia)

F4 Neurotic, stress-related and somatoformic disorders

F40 Anxious-phobic disorders (agoraphobia, social phobias, specific [isolated] phobias)

- F41 Other anxious disorders (episodic paroxysmal anxiety, generalized anxious disorder, mixed anxious and depressive disorder)
- F42 Obsessive-compulsive disorder (annoying thoughts, obsessive rituals)
- F43 Response to severe stress and disorders of adaptation (acute response to stress, posttraumatic stress disorder, disorders of adaptation)
- F44 Dissociative (conversive) disorders (amnesia, fugue, stupor, trances and states of seizures, disorders of motility, spasms, anaesthesia, Ganser's syndrome, disorders of the multiple personality)
- F45 Somatoformic disorders (somatized disorder, undifferentiated somatoformic, hypochondriac disorder, somatoformic vegetative dysfunction of the heart and cardiovascular system, gastrointestinal tract, respiratory system, urogenital system, chronic somatoformic pain disorder)
- F48 Other neurotic disorders (neurasthenia, the syndrome of depersonalization and derealization, etc.)
- F5 Behavioural syndromes connected with physiological disorders and physical factors
- F50 Disorders in food taking (anorexia nervosa, bulimia nervosa, vomiting combined with other psychological disturbances)
- F51 Sleep disorders of inorganic nature (insomnia, hypersomnia, failure to keep to the sleep-wakefulness regimen, sleep walking – somnambulism, horrors during sleep, nightmares)
- F52 Sexual dysfunction not caused by any organic disorder or disease (sexual anhedonia, disturbed orgasm, premature ejaculation, vaginismus, dyspareunia)
- F53 Mental and behavioural disorders connected with childbirth and puerperal period
- F55 Abuse of substances which do not cause addiction (antidepressants, purgatives, analgetics, antacids, vitamins, steroids and hormones, specific herbs and folk medicine means, etc.)
- F6 Disorders of mature personality and behaviour in adults (paranoid, schizoid, dissocial, emotionally unstable, hysteric, anancastic, anxious, dependent, etc.)
- F62 Chronic personality changes not connected with any injury or disease of the brain (after suffering an accident, after a mental disease, etc.)
- F63 Disorders in habits and drives (pathological disposition to games of chance, pyromania, kleptomania, trichotillomania, etc.)
- F64 Disorders in sex identification (transsexualism, transvestism of the double role, etc.)

- F65 Disorders in sex preference (fetishism, fetishistic transvestism, exhibitionism, voyeurism, pedophilia, sadomasochism, multiple sex preference disorders, etc.)
- F66 Psychological and behavioural disorders connected with sexual development and orientation (disturbance of sexual maturation, egodystonic sexual orientation by sex, disturbance of sex relations, etc.)
- F68 Other disorders of mature personality and behaviour in adults (exaggeration of physical symptoms for psychological reasons, deliberate causing or simulation of somatic or psychic symptoms or disability – simulatory disorder)
- F8 Disorders in psychological development
- F80 Specific disturbance of speech development (articulation, expressive speech, receptive speech, aphasia)
- F81 Specific disorders in the development of school skills (reading, spelling, counting)
- F82 Specific disorder in the development of motor functions
- F83 General developmental defects (infantile autism, atypical autism, Rett's syndrome, hyperactive disturbance, Asperger's syndrome)
- F9 Behavioural and emotional disorders that usually develop in children and juveniles
- F90 Hyperkinetic disturbances (disturbance of attention activity, hyperkinetic behavioural disorder)
- F91 Behavioural disorders (limited by family conditions, unsocialized, socialized, oppositionally provocative, depressive)
- F93 Emotional disorders specific for childhood (anxious disturbance owing to parting, phobic, social anxious disturbance, disturbance of sibling rivalry, etc.)
- F94 Disorders of social functioning with the beginning specific for childhood (elective mutism, reactive disturbance of attachment in childhood, disinhibited disturbance of attachment in childhood, etc.)
- F95 Tic disorders
- F98 Other behavioural and emotional disorders which usually develop in children and juveniles (inorganic enuresis, inorganic encopresis, digestive disturbance in infancy, eating of the inedible in infancy and childhood, stereotyped dyskinesiae, stammering, breathless speech, etc.)

The concepts of the registers of mental disorders

Non-psychotic register of syndromes (borderline, neurotic) is mainly

characterized by impairment in the emotional and motor-volitional sphere with the fact of criticism (understanding) of the disease.

Psychotic register of syndromes are characterized by following symptoms: hallucinations, delusions, disorders of consciousness in the absence of a criticism (understanding) the disease.

Syndromes of defect-organical register characterized by cognitive impairment (memory disorders, attention, thinking and intelligence), with a partial fact of a criticism (understanding) the disease.

Criterion	Neurotic	Psychtic	Defect-organical
Critically assess	Present	Absent	Decrease
Reality testing	Present	Absent	Decrease
Delusiones/Hallucinations	Absent	Present	Possible

DISTURBANCES OF SENSATIONS AND PERCEPTIONS

Sensations and perception are the initial stage in the cognitive activity of man, the sensual cognition of the surrounding reality.

Sensation is the primary psychic act, a mental process of reflection of separate properties and qualities of objects or events in the human consciousness, these objects or events producing a direct effect on the sense organs.

The reflection of the outer world is not limited by sensations, but is manifested in a more complex process – the process of perception.

Perception is a mental process of reflection of objects or events in the totality of their properties in the human consciousness, these objects or events producing a direct effect on the sense organs. This is a synthesis of a complex of available sensations and representations, rather than a mechanical unification of all sensations.

Representation is a trace of a former sensation or a former perception. This is an imagery recollection, a mental (subjective) image of the reality which appears in the human consciousness in the absence of the corresponding object or event that produced an effect on the sense organs before.

Representations are particularly important in children and juveniles. Representations are the main component of the children's imagination, the basis of creation, children's fantasies. Children at the age of 3-7 years have an extreme brightness and picturesqueness of visual representations; therefore it is difficult for a child to distinguish the images of representations from those of a direct perception. This ability to reproduce bright representations is termed eidetism.

Eidetism is a physiological phenomenon. It is peculiar to artists (visual), musicians (auditory).

Imagination is creation of new images on the basis of the existing representations. It is a sensual (imagery) basis for abstract (conceptual) thinking. In the act of imagination there is formation of not only new images, but later, in juveniles, of new ideas.

In order to better understand disturbances in the processes of sensation and perception it is necessary to know what distinguishes perception from representation, what properties the perception has.

The perception has the following properties:

1. Perception possesses a sensual verve.
2. Perception possesses extraprojection.
3. Perception does not possess any arbitrary changeability.
4. Perception possesses the sense of reality.
5. Perception possesses non-belonging to "me".

The representation has the following properties:

1. It does not have any sensual verve.
2. It is projected in the inner world of a human being.
3. It can be arbitrarily changed.
4. It does not possess the sense of reality.
5. It belongs to the subject.

Classification of disturbances of sensations and perceptions

I. Hypoesthesia and anesthesia

II. Hyperesthesia

III. Paraesthesiae, synaesthesiae, senesthopathies

IV. Psychosensory disorders

1. Visual psychosensory disorders:

- a) micropsiae
- b) macropsiae
- c) dysmorpopsiae

2. Intero- and proprioceptive disturbances:

an improper body scheme

V. Illusions

1. By analyzers: visual, auditory, olfactory, gustatory, tactile, of general feeling (visceral and proprioceptive).
2. By the mechanism of appearance:
 - a) physical
 - b) physiological
 - c) psychic (affective, verbal, pareudolic)

VI. Hallucinations

1. By analyzers: visual, auditory, olfactory, gustatory, tactile, of general feeling (visceral and proprioceptive).
2. By complexity: simple (photopsiae, acoasm), compound (having some contents).
3. By the completeness of development: complete (true) and incomplete (false, pseudohallucinations, hallucinoids).
4. By the attitude to the patient's personality: neutral, commenting, imperative.
5. Particular kinds of hallucinations: hypnagogic, hypnopompic, extracampic, reflex, functional.

Hypoesthesia is a decrease of the subjective vividness and intensity of sensations and perceptions; it is manifested in such subjects through their loss of sensual verve, vividness and concreteness up to appearance of the feeling of their alienation (it is in the

structure of the syndrome of depersonalization and derealization). For example, a patient with schizophrenia could look at the bright sun with unprotected eyes.

Anesthesia is disengagement of sensations and perceptions owing to disturbances along the projection system or a lesion of the cortical nucleus of an analyzer (optic, auditory, tactile and other anesthesia). It is observed in hysteria.

Hyperesthesia is intensification, increase of sensations of previously neutral stimuli, accompanied by hyperpathic emotional coloring. The stimuli are perceived as excessively bright or loud. The usual light dazzles, the sound of voice deafens, a touch is perceived as painful.

Synaesthesiae are intensification of receptivity of stimuli with radiation of sensations and perceptions to another analyzer; as a result, they acquire some colorings unusual for them, a character of dual sensation. That is, a sound stimulus gives rise to visual sensations, e.g., a color (colored music), an olfactory stimulus excites visual, coloured sensations (roses smell blue), a sound stimulus causes painful sensations.

Hyperesthesia and synaesthesiae develop in the state of intoxication with hallucinogens.

Senesthopathies are various, extremely unpleasant, painful and unusual sensations originating from some internal organs and different areas of the body and having no causes for their origination in this particular organ. These are vague sensations in the form of burning, swelling, bursting open, pouring, twisting, pain in different parts of the body or in the organs where there is no pathological process (inflammation, degeneration, etc.). Senesthopathies may be localized or migrating, isolated or multiple. Typical for schizophrenia are senesthopathies which are fanciful, “florid” in character. For example, a patient complains of “a sensation of fear in the frontal area”, a sensation of the lungs “sticking together”.

Metamorphopsiae (visual psychosensory disorders) are a distorted perception of really existing objects with preservation of understanding of their meaning and essence, as well as a critical attitude of the patient to them (*dysmorphopsiae* are a distortion of the form of objects, *macropsiae* mean enlargement of objects, *micropsiae* are reduction of their size). Spatial relations are disturbed, there are changes in the time sense, assessment of distances, etc. Psychosensory *intero- and proprioceptive disorders* mean distortions or disturbances of perception of the corporal “ego”, they are manifested in the sense of changes in the proportions and dimensions of the body, its parts. Usually they are in the structure of such syndromes as depersonalization, an improper body scheme, dysmorphophobia and the hypochondriac one. Examples: “the head is enormous”, the arms are too long, the teeth are loose.

Illusions are a distorted perception of a really existing object with a change of its contents, meaning.

Depending upon a disturbance in the activity of some or another analyzer, there are auditory (a distorted perception of the meaning of the real speech, hearing of voices in some noise, etc.), visual and other illusions. For instance, in the noise of a wind the patient hears voices: “we will kill you”. Instead of the cactus, the boy sees a porcupine on the window-sill.

Illusions of the general feeling (intero- and proprioceptive) include sensations of compressing, pressing, spasm, tension, pulsation in the internal organs and other parts of the body, i.e. those various and peculiar sensations which can ground on real stimulations of corresponding receptors too.

By the mechanism of appearance, illusions are subdivided into:

Physical – they appear as a result of peculiarities in physical properties of objects and substances (refraction of objects on the border of two media, mirages).

Physiological – they are connected with physiological peculiarities in the functioning of analyzers (e.g., the sensation of movement after the train stops; the horizon, where the land meets the sky; parallel lines at a distance are perceived as meeting together, etc.). They are caused by imperfection of the sense organs.

Illusions can be caused by the fact that attention is concentrated on one stimulus, therefore others may be perceived in a distorted way. Jaspers called these illusions as “illusions of inattention”.

Psychic illusions are connected with a change in the mental activity. They are: affective, verbal and pareudolic.

Strong emotions, fear, expectation, stress give birth to *affective* illusions. Their appearance is facilitated by difficult conditions for perception (bad illumination, audibility). Audible *verbal*, or *interpretative*, illusions develop when in different sounds (the noise of a wind, squeak, gritting of wheels of a train, etc.) or talks of the surrounding people the patient hears reproaches, orders at his address. These illusions are often accompanied by delusion of reference. *Pareudolic* illusions appear owing to a disturbance of consciousness (in intoxication, hyperthermia, taking of hallucinogens). In pictures of wallpaper, shadows of objects the patient with pareudolic illusions sees whimsical, fantastic monsters, dreadful images. Pareudoliae are compound sensual, imagery illusions. What was read and seen before acquires excessive strength and is superimposed on the real image which does not correspond by its contents. For example: in a verse “The Forest Vampire” by Goethe a sick boy in a feverish state perceives the surrounding wood and sky as frightening, branches of the trees were seen as stretched pawns of a wood vampire.

Hallucinations are an imaginary perception without any real stimulus (image, phenomenon) at this time. For instance, the patient states that he sees a devil “making faces, dancing” before him and is excessively surprised that the physician does not respond to the devil and says that “he is not here”.

According to the phase-inhibition theory by Ye.A. Popov, hallucinations are pathomorphologically based on the equalizing and paradoxical phases of an incomplete protective inhibition.

Visual hallucinations are an imaginary perception of visual images without any real stimulus (image, phenomenon) at this time. For example, the patient states that he sees snakes crawling under the bed. As a rule, visual hallucinations reflect acute states, while auditory (verbal) and tactile hallucinations reflect chronic ones. Visual hallucinations are more typical for the exogenous-organic pathology.

Auditory hallucinations: the patient hears calls, talks, music, singing, etc., which do not exist at this moment. *Verbal hallucinations* in the form of a human speech are particularly distinguished. *With respect to the patient's personality*, they can be neutral, commenting (hostile, threatening, benevolent, antagonistic – some voices are kind, others are malicious), imperative, i.e. ordering the patient to do something.

Imperative hallucinations represent a grave danger for the patient himself and surrounding people because “the voices” may order to kill somebody, set a flat on fire, throw out valuable things, etc.

Olfactory hallucinations: the patient perceives some smells which are absent at present. They may be pleasant, but oftener they are foul, e.g., strong smells of burning, petrol, “the smell of flatus”. Strong smells are observed in the olfactory aura in epileptics.

Gustatory hallucinations are manifested by the fact that the patient perceives some gustatory stimuli which do not exist at this moment; often it is a smack of a poison, “bane” (mercury, lead, strychnine).

Tactile hallucinations: temperature ones, a perception of some moisture on the body, in the form of touches, compression, strokes, pinches, thrashes, stretching of the skin, etc.

Visceral hallucinations (senestopathic hallucinosis): there is a perception of an object or image in some organ or part of the body. For example, the patient saw that “some snake crawled into my mouth and settled in my oesophagus”.

Simple hallucinations (photopsiae, acoasm) do not have any contents. They are perceived in calls, light effects, luminous points, etc.

Compound hallucinations have some contents, may be in the form of images, scenes, panoramas, dialogues, talks, smells, touches, etc.

True, complete hallucinations are those ones that possess all the properties of perception, namely sensual verve, extraprojection, absence of an arbitrary changeability with a resultant sense of reality. For instance, the patient saw a witch. He vividly and lively described details in the appearance of the “witch”, her deathly pale body, “claws” (it was the reason to regard this image as a witch). She sat at the room, made faces,

scared, but he could not do anything, the witch was real, “true”. This patient suffered from a complete, true hallucination.

Incomplete hallucinations (pseudohallucinations) are those ones that do not have some of the properties of perception. If there is no extraprojection, then it is a pseudohallucination, described by V.Kh. Kandinsky and manifested in the fact that the patient hears inside his head some voices, sounds, etc., or sees with “his inner eye” “some little fellows on the gyri” or other images. Pseudohallucinations lose such a property of perception as the sense of reality and differ from real stimuli.

Particular kinds of hallucinations

Hypnagogic are the hallucinations which appear during a transition from wakefulness to sleep (when falling asleep). These hallucinations develop with closed eyes, they may be isolated or multiple, scene-like or kaleidoscopic.

Significantly less frequent are **hypnopompic hallucinations** which appear when waking up, i.e. during a transition from sleep to wakefulness.

These hallucinations disappear when the patient falls asleep or wakes up completely.

Extracampic are the hallucinations localized outside the visual field. For instance, a patient looking straight forward “sees” a devil behind him.

Functional hallucinations: a hallucinatory stimulus is perceived side by side, simultaneously with a real one. An example: in the noise of water one also hears the noise of water and “voices”. The difference between illusions and functional hallucinations lies in the fact that in illusions, instead of some stimulus, there is perception of another one by contents (not the noise of water when a tap is turned on, but a whisper speech), while in functional hallucinations, as it was said before, both the noise of water (real) and a hallucinatory speech in it are perceived.

Reflex hallucinations: these are reflected when a real stimulus (e.g., a turn of a key in a lock) is hallucinatorily perceived in another place (a turn of a key in the heart). Or, for instance, a spindle in a hand is perceived as a spindle spinning and buzzing in the heart.

Suggested hallucinations are called forth during a session of hypnotherapy.

Negative hallucinations: absence of perception of really existing objects.

Episodical hallucinations: they appear periodically, e.g., ecstatic ones in epileptics.

Hallucinations of Charley Bonnet’s type: mentally healthy people who lost their sight or hearing develop visual or auditory hallucinations (with a critical assessment). For example: a female patient (who had become blind) saw “a blonde girl in a beautiful blue dress going along a fence painted green”.

Phantom phenomena in people with amputations: they are hallucinations in mentally healthy subjects (with a critical attitude to them), when a person perceives presence of an amputated extremity, may feel a pain in it, etc.

Children and juveniles most frequently have visual hallucinations (animals, monsters from the tales they have read, etc.), auditory ones being in the form of simple or elementary hallucinations (ringing, noises, shots, calls by name, etc.).

Hallucinations are revealed in a conversation with the patient, questioning him, observing his behaviour, facial expression, etc. Patients with auditory hallucinations would lend their ears to something, talk with “voices”. In case of visual hallucinations, patients would look attentively to something; patients with tactile hallucinations would whisk off something from themselves, etc.

In patients with delirium tremens, it is possible to call forth hallucinations (if they disappeared) or cause their intensification (if they are present) with help of a slight pressing on the eyeballs (Liepman’s symptom). The physician may show a patient a clean sheet of paper and suggest to read a text written there (suggested hallucinations), and the patient will read a non-existent hallucinatory text (Rieger-Reichardt symptom). Auditory hallucinations intensify or appear in acute or chronic alcoholic hallucinosis after the physician suggests the patient to listen attentively to a monotonous sound of a metronome, clock (Bekhterev’s symptom). It is possible to suggest a patient to speak on the telephone whose receiver is disconnected from the set, and the patient will “hear” a voice in the receiver (Aschaffenburg’s symptom).

Must be remembered:

The most common types of hallucinations in psychiatric disorders are pseudohallucinations (the most typical are **auditory hallucinations**).

The most common hallucinations in organic psychiatric disorders (such as delirium) are true hallucinations (the most typical are **visual hallucinations**).

The most common hallucinations in cocaine intoxication are tactile hallucinations.

All types of hallucinations can be observed in patients with temporal lobe epilepsy including tactile and olfactory hallucinations

Differential diagnosis of true and false hallucinations

LIMITATION CRITERIA			
Hallucinations	Проекция патологических образов	Чувственная яркость, живость галлюцинаторных образов	Feeling of violence, "done", influence from outside
True	into the surrounding	saved	absent

	space (“outside”)		
False (pseudo- hallucination nations)	into subjective space (“inward”)	absent	comes to light

DISTURBANCES OF THINKING AND INTELLECT

DISTURBANCES OF THINKING

Thinking is the higher form of reflection of the objective reality, a process of a generalized and mediated reflection of objects and events of the material world in their natural connections and relations.

In pathological states, there may be a disturbance of the associative process or disappearance of connections between isolated thoughts, it demonstrating a disturbance of thinking by form. In other cases there is a disturbance in the process of formation of conclusions, the logic suffers, there is a disturbance of thinking by contents.

Classification of disturbances of thinking

1. A disturbance in the formation of concepts:

- a) pseudoconcepts
- b) condensation of concepts
- c) neologisms

2. A disturbance in the rate of thinking:

- a) rapidity of thought, "galloping ideas"
- b) retarded thinking
- c) delay, arrest (Sperrung)
- d) mentism

3. A disturbance in the form of thinking:

- a) pathologically circumstantial thinking
- b) philosophizing
- c) non-continuous thinking – schizophasia
- d) incoherent thinking
- e) amorphous thinking
- f) paralogical thinking
- g) autistic thinking
- h) symbolic thinking
- i) verbigerations
- j) perseverations
- k) affective thinking

4. A disturbance in the contents of thinking

- a) fixed ideas
- b) dominant ideas
- c) overvalued ideas
- d) delusion-like fantasies

- e) forced thoughts
- f) delusions

Forms in the formation of delusion:

1. Primary delusion (interpretative).
2. Secondary delusion (sensual, imagery).

The contents of delusions:

- a) persecution,
- b) influence,
- c) reference,
- d) pretence,
- e) damage,
- f) self-condemnation, self-humiliation,
- g) negation (nihilism),
- h) hypochondria,
- i) jealousy,
- j) love,
- k) invention,
- l) reforming,
- m) high origin,
- n) litigiousness,
- o) expansive delusions,
- p) induced delusions.

Pseudoconcepts are false concepts formed on the basis of casual, insignificant signs. For example, a female patient asks to give her green and feels hurt that she is not understood.

Condensation of concepts (agglutination) is manifested in a fusion of several concepts which are rather remote from one another. It is observed in schizophrenia and some organic lesions of the brain. For instance: *when a female patient was asked how she felt she answered “shockolately” and explained it in the following way: “after insulin shocks my health is beginning to return to normal”*.

Neologisms are new, unusual concepts created by patients.

For example, *complaining of her destiny a female patient says: “It is not life, but apheides and poltoraniae”*.

Pseudoconcepts, condensed concepts and neologisms are usually produced by patients with schizophrenia. But one should remember that sometimes neologisms are used as a literary device by writers and poets (Khlebnikov, Mayakovsky).

Rapidity of thought is observed in maniac and hypomaniac states of various origin: in the manic-depressive psychosis, exogenous psychoses, at the initial stage of alcoholic intoxication. Usually rapidity of thought passes against a background of high spirits and increased distraction of attention, it is characterized by a rapid, easier development of associations, most frequently of superficial ones. The mental productivity of such patients is sharply decreased, they are characterized by an easy loss of the object of discourse. A significant rapidity of thought is termed “galloping ideas”. In galloping ideas the relation between thoughts is not lost, but the patient can say only some part of them, the speech lags behind the thought, having begun some phrase the patient passes to the second one without completing the first phrase, he skips words, hurries to say another thought, etc.

In case of rapidity of thought often there is a decrease of reasonableness, the sense of tact, confusion, the patients may say to a person’s face such things which a healthy person would prefer to keep to himself.

An example of the patient’s speech:

“Doctor, I love you ... the love is not a vice, but a considerable swinishness... look at her, there is her grandson’s shirt under her gown... Friday from under Saturday... tomorrow will be Saturday and my husband will come... ha-ha... a husband is not a jazz band... ha-ha”.

Retarded thinking is observed in asthenic states and the depressive syndrome; it is characterized by a decreased number of ideas accompanied by a subjective sensation of stiff thinking, the feeling of the patient’s own intellectual indigence. The thoughts pass slowly, the patients complain that they have “few thoughts”, it is possible to observe appearance of the sensation of emptiness in the head. The speech is slow and has scanty words, the patients answer questions in one syllable and after a long pause.

Delay of thinking (Sperrung) is manifested by a sudden arrest in the flow of thoughts. It is observed in patients with schizophrenia and easily revealed in a conversation. The patient would unexpectedly stop talking and then explains his silence by the fact that he had a delay of thoughts, for some time he had a sensation of absence of thoughts. Sperrung can be detected during an experimental-psychological examination when the patient’s activity is characterized by stops of various duration explained by the patient as “disappearance of thoughts”. Sperrung may last from a few seconds to several days. Sometimes it is accompanied by signs of psychic automatism; in this case the patient explains absence of thoughts as their “taking away”. Sperrung does not affect the speed in the course of associative processes, after the delay the thoughts pass again as usual.

Flow of thoughts (mentism) is an obsessional automatic flow of thoughts which is painfully felt by the patient; the thoughts incoherently appear and continuously flow in the consciousness irrespective of the patient’s wish. The flow of thoughts is in the

structure of Kandinski-Clerambault psychic automatism syndrome. It is observed in schizophrenia, encephalitis, traumatic injuries of the brain, in the state of extreme asthenia, in intoxications with some drug preparations (diphenylhydramine hydrochloride).

Pathologically circumstantial thinking (stiff thinking) is observed in epileptic dementia, at the remote period of epidemic encephalitis, in other organic diseases of the CNS. The disorder is characterized by thoroughness, an increased detailing, an inability to separate the main from the minor, a difficulty in switching over from some subject to another one. The speech includes words-parasites (“you see”, “so to say”, “so”, etc.). Repetitions, pauses, diminutive words and terms of endearment are typical. The patient would deviate from the main subject of the story, then some time later return to it and again turn to side details, his reaction to the questions with which his interlocutor interrupts his speech is little, even if these questions are to help him.

An example of the patient’s speech:

Question: “Did a person who got stuck in a bog act correctly when he tried to pull himself out by his hair?”

Answer: “It is difficult to say exactly what hair, probably a dark-haired man, if it was very boggy, would not pull out himself unaided, or maybe nothing more remained for him to do. Let him have a nice time. I regret his hair, if it is good, like in a tale, they would pull and pull, but will they draw out the turnip? But it was difficult too.”

Philosophizing means idle futile discourses deprived of a cognitive sense. It is observed in schizophrenia, other diseases. In philosophizing, the patient uses formal casual associations, where the purpose of a task is moved back to a background, while the patient’s desire to philosophize is moved forward to a foreground. Philosophizing is particularly striking in those cases where fulfilment of a task requires wordy definitions, wordings, comparison of concepts. In such cases it is possible to observe an increased pretentiousness in contrast with an insignificance of the object of the judgement, commonplace discourses, a pathetic tone of the speech, often against a background of an increase in the self-estimation and level of claims.

In schizophrenia, philosophizing reveals actualization of “weak” signs, disruption of associative processes, destruction of mental stereotypes formed during the life. In patients with epilepsy, philosophizing is of a compensatory character which reflects overestimation of the personality and is manifested by an instructive tone of speech, trite judgements with poor contents, as well as by inertness, a difficulty in distraction from the situation, a narrow range of thinking, egocentric tendencies with a poor stock of words. In oligophrenia at the degree of debility, philosophizing is of a compensatory character too, where loquacity of judgements hides poverty in the contents of speech.

Below is an example of philosophizing.

A patient's treatise on subject "Why there is appearance of love". In the organism of a human being there is appearance of hormones. In a man they are male, in a woman they are female. These hormones are of a protein origin. But when did they originate? In what conditions? Every human being from the very moment of conception has an ability to excitement. Between an excited tissue and an unexcited one appears a biocurrent which externally is expressed by a magnetic flow. The force of this magnetic excitation changes depending upon the environment and the latter, therefore, can produce some effect on excitability of the organism. Hence the force of this magnetic field of one person (we suppose a man and a woman) begins to interact with another one. An internal excitation of the man creates one potential. The externally applied potential may contribute to the internal excitation. The human being perceives the externally applied potential by his olfactory, visual, sensual and auditory organs and the surrounding magnetic field which is not possible to see, hear and even feel.

Paralogic thinking is observed mostly in schizophrenia and is characterized by a disturbance of logical relations in judgements, conclusions, arguments, cause-effect correlations. Here it is often possible to observe preservation of memory, ability to count, understanding and reasonableness with respect to many everyday occurrences. In case of paralogical thinking, the patient may use expressions with an inappropriate meaning, not caring whether some or another expression has any definite contents and meaning, there is no reasonableness and criticism with respect to logical mistakes; these mental disorders are difficult to correct. In paralogical thinking, the patient would ignore real true prerequisites and arguments, using instead of them conclusions which do not have any logical relation with the initial judgements.

Slide-down, amorphous thinking: it is a deviation from the main thought to some side-thoughts which substitute for the main one. A loss of logical relations may be complete or partial.

Non-continuous thinking is typical for schizophrenia and is manifested by absence of any semantic relations between concepts with preservation of the grammatical system of the speech. The patient's speech is deprived of contents and logical relation, though externally it seems regular because of preservation of grammatical relations. Only in case of a sharply expressed lack of continuity there is a disturbance in grammatical relations and then the speech consists of an irregular mere verbiage ("a wordy jumble"). In non-continuous thinking it is possible to observe slide-downs of the thought expressed in passing from some notion to another one without any natural logical relations, there is appearance of associations by a "weak" or "latent" sign. It is not in rare cases that the patient's speech does not depend upon presence of an interlocutor (a symptom of monologue), the speech does not fulfill its function of communication any more, it becomes incomprehensible for the surrounding people.

Here are some examples of speech of patients with non-continuous thinking:

“A cake of imperialism – it is forty chickens – having become sad, they were drawing her eyes on Whatman paper of the Moon, but a millionaire was whistling.”

“Show... I will eat it... Would bake pies... I don't know...I'll cut off the same one... pies... About neither Ivan nor Darego... Show... will be done by me... plastics... I'll eat... give a disk for pies.”

“I'll take all in my fist, carry... maybe rotated. Well, here you are... Ivan-pie... to press a button... to turn round... a small study... to walk on a platform.”

“And I am rolling a cigarette; but why a cigarette, maybe a single rat? Or maybe not a cigarette but a cake-dad. If a cake is dad, then cream will be mum.”

“Thank you, my dear fellow, that I am not Kate. Aunties and uncles, be so kind, look at my amiable finger.”

Here is an example of “a wordy jumble”: *“Khiumala, riumala, piumala, zhiumala, mex, regis, pan, pan, pan, yarbin, dirbin, palamida, bruda plet, yatka, purus, lakkhid, elivator, acquirated, maniloid, tiuligen, thirty three, twenty five and two, twelve, twenty two, have mercy upon me, O Lord, let this soul repose with the saints, sands, cents, dollars mine, yours, Robert Burns, come, become, vemala, pemala, so, though, oh, low, no, go.”*

Incoherent thinking is characterized by inability to form associations; separate perceptions, images, concepts are not connected among themselves. There are no, even primitive, mechanical associations by likeness, by contiguity in time and space. The patient is disorientated in time and place, does not understand what is taking place around him, he is confused. The patients' speech is incoherent, it consists of separate, casual words, not connected either by meaning or grammatically, the phrases are constructed in wrong ways.

Incoherent thinking is observed in acute exogenous psychoses, accompanied by a disturbance of consciousness in the form of amentia, and is indicative of a severe state of the patient.

Below is an example of the speech of a patient with incoherent thinking:

“Sewed... got cold... bang... roar... never... yes, yes, to nobody... spun... cornfields... oh-oh-oh. But the mother is so young, very young, pyoung... tibol and nif... an utter rout.”

Autistic thinking rests upon the patient's inner feelings, his subjective aims, wishes, fantasies, rather than on real facts. The patient does not pay any attention to the fact that his thoughts contradict the reality. Rather often it appears as “a dawn” and is expressed in realization of the patient's “innermost wishes”.

Symbolic thinking: the patient supplies various concepts with some allegorical meaning which is absolutely unclear for other people, but for the patient himself has a certain sense. The patient may symbolically understand the speech of the surrounding people, the meaning of colours. For instance, having seen a nursery maid wearing a

yellow jacket a female patient declared: “She is a traitor, because yellow is the colour of treachery”.

Verbigeration is a senseless repetition of the same words or scraps of phrases or a simultaneous appearance of two contrary thoughts. It is typical for schizophrenia.

Perseverations and stereotypies of thinking: sticking to some representations. They are manifested by repetitions of the same words or sentences many times, and for this reason the patient’s answers sometimes become senseless.

It is not in rare cases that perseverations and stereotypies accompany aphasia in patients with apoplectic or senile dementia, they are also observed in other organic lesions of the brain.

Here is an example of the speech of a patient with perservation:

Question: “What are your first and second names?”

Answer: “Piotr Ivanovich.”

Question: “In what year were you born?”

Answer: “Ivanovich.”

Question: “Where do you live?”

Answer: “Ivanovich.”

Affective thinking: the patient constructs his judgements and conclusions on the emotions and wishes prevailing at the moment, rather than basing on logic.

Fixed ideas are representations and thoughts which appear involuntarily (irrespective of the patient’s will) and are alien to the contents of consciousness at this moment; they are characterized by a critical attitude of the patient to them, understanding of their morbid character, as well as by an active aspiration for getting rid of them. Unlike delirium, patients with fixed ideas preserve their critical attitude to them, the course of these ideas is episodic, fit-like. They are observed in neurosis of annoying states, in psychasthenic psychopathy.

Dominant ideas are right thoughts which are connected with the life, prevail in a person’s consciousness and sometimes prevent him from concentrating on the current activity. For instance, constant thoughts about a sick child during work. They are more frequently observed in depression.

Overvalued ideas are judgements resulting from real circumstances but owing to their emotional saturation they take the prevailing meaning in the consciousness which is disproportional to their objective importance. Overvalued ideas are fruitless, the thinking becomes unilateral, everything that is not connected with the overvalued aim or contradicts it is ignored and suppressed. Overvalued ideas may affect the behaviour, inciting the subject to exclusive actions.

Unlike delirium, overvalued ideas yield to correction, though with difficulty, under the influence of forcible logic arguments and a change of life circumstances, it

contributing to a loss of their affective saturation and urgent significance. They are observed in psychopathies, schizophrenia, affective psychoses.

Variants of overvalued ideas

(according to A.O. Bukhanovsky et al., 1998)

Overestimate of the biological properties of personality	Overestimate of the psychological properties of personal or creative work	Overestimate of social factors
<ul style="list-style-type: none"> - dysmorphophobic - hypochondria - sexual - inferiority - self improvement 	<ul style="list-style-type: none"> - inventions - reformatory - talent 	<ul style="list-style-type: none"> - guilty - erotic - Litigation (Querulantism)

Delusion-like fantasies are relatively short-term and most typical for juvenile psychopaths who want to appear before people of their age playing a hero, an outstanding personality, and with this purpose they exaggerate facts, invent fables and believe in them themselves.

Forced thoughts are elementary, they appear in the consciousness unexpectedly, any stage of doubt and struggle is absent. The patients would ask to keep them from throwing themselves into a stair-well, spitting into somebody's face, because they are not sure that they are able to control themselves. Such thoughts are observed in patients who suffered encephalitis, a brain injury.

Delusions are wrong judgements and conclusions which appear on a morbid basis, completely seize the patient's consciousness and do not yield to correction. They reflect reality in a distorted way, are notable for constancy and firmness; any attempts to dissuade the patient, prove him incorrectness of his delusional constructions, as a rule, result only in intensification of delirium. Typically the patient is convinced and confident in an absolute reality and reliability of delusive feelings.

Development of delirium is connected with a certain dynamics in the patient's state. At first, there are emotional disorders in the form of internal tension, unexplained

anxiety, foreboding of some inevitable evil, increasing alarm. The patient tries to understand what is going on, why the surroundings have acquired a new meaning which is not clear for him, often there is appearance of a delirious perception: everything around seems unreal, artificial or threatening, ominous, having some particular meaning hidden from the patient. Delirious perception is directly connected with formation of delirious representation, on whose basis some events in the past of the patient's life are particularly distinguished in their new meaning. Finally, there is development of delirious realization: a peculiar dawn with realization of the essence of events not understood before, delusional judgements receive some concrete contents, it is accompanied by a subjective sense of relief, emotional calming – crystallization of delirium occurs.

Primary delusion is based on false interpretations originating from either real facts of the outer world or inner sensations and feelings. The patients interpret behaviour of the surrounding people and their statements in an unexpected way. The same happens with respect to inanimate objects too.

This delusion is systematized, stable, expanding and complicating.

Secondary (sensual, imagery) delusion appears in presence of other mental disorders: hallucinations, disorders of emotions and consciousness. Its intensity corresponds to that of these mental disorders. Most frequently, sensual delusion appears acutely, usually it is unsystematized, unstable, its plot is vivid, but unstable.

Depending upon the contents of statements, the following kinds of delusion are distinguished: delusions of persecution, influence, poisoning, jealousy, self-condemnation and self-humiliation, grandeur, etc., the name usually reflecting the contents of delirious feelings.

The delusion of grandeur is manifested in the patients' statements that they are people of outstanding intellect and great strength. In the delusion of wealth the patient states that he possesses great treasures. Different clinical kinds of delusions are not specific for some definite mental disease. Thus, delusions of grandeur, high origin and wealth may be observed in the maniacal phase of the manic-depressive psychosis, in the expansive form of general paralysis of the insane, paraphrenic states of various genesis. Within the limits of each nosological form the delusions have their clinical peculiarities. In the maniac syndrome, delusions of grandeur depend upon the affective state and do not reach any significant expressiveness; in general paralysis of the insane, delusions are absurd, amorphous, unstable; in the structure of the paraphrenic syndrome, delusions are of a systematized character.

In the delusion of invention, the patients tell about their invention of various apparatuses, devices and instruments which are to improve the life of the mankind. Such a kind of delusions is often observed in the paraphrenic syndrome within the framework of schizophrenia.

In case of erotic delirium, the patient feels personal interest taken in him by some representatives of the opposite sex. The object of delirious feelings is usually subject to a real persecution from the side of the patient who sends her numerous love-letters, makes appointments. Often it is accompanied by the patient's morbid overestimation of his own personality. This delirium is most frequently observed in schizophrenia.

Delusions characterized by a negative emotional tint are typical for depressive states. These are delusions of self-condemnation, being sinful, impoverishment, a bodily defect, in hypochondria. The delusions of self-condemnation, self-humiliation and being sinful are observed in the expressed circular depression. In involitional melancholia there are delusions of self-condemnation and impoverishment passing against a background of the anxious-depressed affect.

The delusions of reference are manifested in the fact that any event or act of the surrounding people acquires a particular significance in the patient's eyes. The red colour of the traffic light means that there will be bloodshed. As soon as the patient takes a tram all people inside it begin exchanging glances.

The patient with delusions of persecution would state that he has become an object of persecution by some people or their group who have united with the aim to kill him. It should be remembered that such patients represent a certain social danger, because often from the persecuted they become persecutors and inflict severe injuries to their imaginary offenders.

In case of the delusion of influence the patients are convinced that they are subject to influence with help of various devices, rays (delusion of physical influence) or hypnosis, telepathic suggestion at a distance (delusion of psychic influence). Patients with delusions of poisoning state that somebody adds some poison to their food, fills the flat with a lethal gas, etc.

The delusions of reference, influence, persecution and poisoning are most frequently observed in schizophrenia. The delusions of poisoning accompanied by those of a bodily defect are observed in involitional psychoses.

In the delusion of reference supplementing the delusions of persecution, the patient takes events indifferent to him as referring to himself. What is going on around him has a double meaning, everything is of particular significance (delusion of special meaning).

The delusion of jealousy is characterized by the patients' statements about adultery of their partners in marriage. The patients spy upon their wives or husbands, constantly try to find out proofs of the adultery; all the behaviour, appearance, statements of the spouse, his/her surroundings and events are considered as "evidence" testifying to the adultery. It is not in rare cases that such patients are socially dangerous as they may make attempts to kill the unfaithful spouse and his/her imaginary lovers. The delusion of jealousy is observed in schizophrenia and alcoholism.

Induced delusions originate in a mentally healthy person as a result of adoption of delusions from a mental patient with whom the induced subject contacts. Most frequently it develops in personalities with a low intellectual level, who are unable to correctly comprehend the situation in a critical way and have increased suggestibility. In these cases the induced person begins to state the same delusions and in the same form as the mental patient does. Usually they are people from the patient's surroundings who have particularly close personal contacts with him and are his family members or relatives. Appearance of the induced delusion is facilitated by the patient's deep conviction in the truthfulness of his thoughts as well as by the authority he had before the disease.

Patients with the delusion of pretence, the delusion of intermetamorphosis state that everything around them is specially fabricated, scenes of some performance from their life are played, it is carrying out of an experiment, a double game, everything continuously changes its meaning: at one moment it is a hospital with its medical staff and patients, at another one it is some investigation establishment; the physician is not a physician, but an investigator, the case report is a file with his personal records, the patients and medical staff are disguised officers of security services.

The delusion of damage: the patients believe that evil-wishers inflict them some material or moral damage, rob, spoil their belongings, defame them, infringe upon their rights. Usually it is manifested within the framework of the delusion of persecution.

The delusion of litigiousness, or querulousness: the patients convinced in an inattentive, unjust or ill-disposed attitude to them provoke conflicts, devote themselves to disclosures, waste for it much strength, time and sometimes all their material resources, complain to various establishments and departments, involving still more and more new people into their delusions; the subjects of the delusions are drawn from the real situation: squabbles with their neighbours, conflicts with members of their family and colleagues.

In case of the depressive delusion with hypochondriac subjects at an old age, statements easily become of a grotesque, megalomaniacal character. Here, by its contents, the delusion becomes nihilistic, or the delusion of negation. For example, at first the patient states that he has an undiagnosed severe disease of his stomach and he is dying of it; later he makes statements that he has no stomach as it has already rotted and there is some emptiness in its place; soon one may hear that the patient himself does not exist either, he is a living corpse, he has decomposed alive; still later he says that there is nothing – no world, no life, no death (Cotard's syndrome).

The hypochondriac delusion is connected with a conviction of having a severe incurable ailment. Close to it is dysmorphomania which may be defined as a delirious conviction in the presence of a bodily defect, most frequently of visible parts of the body: the form or size of the nose, ears, teeth, arms, legs, etc. Dysmorphomania is

characterized by depression, a careful disguising of their “bodily defects” by the patients, an activity aimed at correction of the imaginary defect up to surgical operations, a tendency to appearance and development of delusions of reference.

Bizarre delusions: The term bizarre is used for delusions which are scientifically impossible and culturally implausible (ununderstandable). For example, if a patient says that aliens have stolen his heart, it would be an example of bizarre delusion. Its scientifically impossible that anyone's heart can be stolen, and it's also ununderstandable that how can someone start believing that their heart has been stolen.

Nonbizarre delusions: These are delusions which are false but are possible, i.e. they can happen. For example, if a patient develops a delusion that his family members want to take away his property, it would be an example of nonbizarre delusion, since it is not impossible for a family member to take away property of another family member.

Must be remembered:

Obsessions	Overvalue ideas	Delusion ideas
Unconscious arise, inadequate situations of experience, dominate the patient's consciousness, they remain critical (accompanied by a “struggle of motives”)	Affectively colored, dominant judgments were formed as a result of real events (not accompanied by a “struggle of motives”)	Wrong judgments, uncorrectable conclusions are formed on a pathological basis and determine the patient's worldview

Speech disturbances

Thinking is expressed through oral and written speech whose disturbances occur in various diseases.

Two main forms of the oral speech disturbances are distinguished:

a) those caused by mental disorders (affect, delirium, a cloudiness of consciousness, etc.) and b) those caused by an organic lesion of the brain, where first of all sensory-motor “instruments” of the speech suffer. Sometimes, speech disturbances caused by neurotic states are distinguished too.

Speech disturbances caused by mental disorders concern its rate, articulation, grammatical system and contents.

Accelerated speech. A slight degree of accelerated speech in some cases is manifested by verbosity, in others it alternates with sayings, puns, aphorisms, metaphors and quotations adopted from works of literature; it makes the speech more figurative and expressive. The consistency and meaning of statements here obviously do not suffer. In case of a marked acceleration of speech the patients do not have time to finish a begun thought, the phrases are suddenly brought to an end, the subjects of statements are continuously changed, and the speech itself becomes curt, rather often it is interrupted by questions for which the patients do not expect to receive any answers and go on talking themselves. The speech may alternate with laugh, cries, whistling, singing, etc. Here the meaning of statements and their consistency are always disturbed. A further acceleration of the speech results in the fact that statements begin to become phrases with an uncoordinated meaning, consist of isolated words and, lastly, there may appear scraps of words or inarticulate sounds.

In slow speech, spontaneous statements decrease in number. The stock of words becomes poor, the grammatical structure of phrases simplifies. In a number of cases the patients answer in one syllable: “yes”, “no”, etc. The free speech may completely disappear, this symptom is termed mutism.

Disturbance of articulation is manifested by an increase in the sound intensity up to crying or, on the contrary, its weakening down to whispering. Depending upon affective and other disturbances, there may be theatrical, grandiloquent, pathetic speech or, on the contrary, it is moaning, lamenting. Changes in the speech articulation depend upon the stresses made on separate words or phrases, on appearance of intonations unusual for this person, e.g., in puerile speech. Peculiarities of articulation are manifested in such shades of speech when it contains confidence, peremptoriness, evasiveness, reservations, sugariness, sugariness, humility, bewilderment, anxiety, etc.

Disturbances in the grammatical system and contents of statements usually do not represent an isolated disorder. In many cases they are closely connected with the rhythm of speech and articulation.

These disturbances are as follows:

Bradyphasia: a common term for all cases of slow speech.

Verbigeration (stereotypic speech): a monotonous repetition or screaming out of the same short phrases, words or interjections.

Anxious verbigeration: a monotonous repetition or screaming out of short phrases, words or interjections having some depressive contents: “send me to a crematory”, “it is terrible, it is terrible, it is terrible; I am dying, I am dying”, etc.; “oh, oh, oh”, etc.

Glossolalia (cryptolalia): creation of one’s own language in which neologisms prevail. In every patient, the vocabulary and syntax are constant; thereby it makes possible to understand to some extent what they say.

Logorrhea (polyphrasia, **incontinence of speech**): rapid, garrulous speech; it may be accompanied by incoherence of its contents.

Miss-talking (miss-speech): the patients' answers are not connected with the questions asked to them; sometimes their out-of-place answers include some words from the question.

Monologue: uninterrupted speech addressed to an interlocutor but caused first of all by the patient's inner state rather than by a necessity to exchange opinions. In a monologue, the patients may pay no attention to any questions asked but go on talking themselves. A monologue may consist of words which are correctly pronounced and syntactically united, but to a significant degree it may be made of fragments of words and paraphrasiae (verbal and literal), be accompanied by logoclonism and disturbed syntax (Alzheimer's disease). If a monologue is a constant form of speech it is a reliable indication of some mental disease in combination with negative signs.

Mutism: absence of any verbal communication with surrounding people, but the speech apparatus is intact.

Elective mutism: absence of verbal communication when talking about certain subjects, in certain situations or with respect to certain people. **Hysteric mutism**: absence of verbal communication accompanied by expressive or hyperexpressive facial expression and movements.

Mirror speech: pronunciation of words (read, heard, spontaneously appearing) from their end.

Pretentious speech (mannered speech): use of the words which are uncommon, hardly understood or have an inappropriate meaning.

Oligophase speech (oligophasia): slow, monotonous (plateau), grammatically simplified speech with scanty words.

Puerile speech: use of words and turns of speech typical for children by an adult: use of diminutive words, lisp, burr, a simplified or distorted grammatical structure of phrases, mentioning of oneself as the third person.

Sugary speech: slow speech with use of diminutive forms of words, trite expressions containing a lot of attributes with a positive affective assessment ("sweet, good, dear").

Telegraphic speech consists of short or desultory phrases having no prepositions and conjunctions.

Echo speech (echolalia): an automatic single or multiple (echopalilalia) repetition of some words (echophasia) heard from the surrounding people.

Schizophasia (schizophasic speech): a form of broken speech (a set of words having no meaning is united into phrases which are constructed keeping grammar rules).

Speech disturbances mostly caused by organic lesions of the brain

Aphasia: a disturbance of speech with an absolute or partial loss of ability to understand anybody's speech or use words and phrases for expressing one's own thoughts; the articulation apparatus and hearing are intact.

Amnesic aphasia (nominal aphasia): loss of the ability to name objects with preservation of the ability to describe them. An inability to name fingers is the initial manifestation of amnesic aphasia.

Motor aphasia (expressive, Broca's aphasia): a disturbance in the motor activity of speech with preservation of understanding oral and written speech.

Sensory aphasia (semantic aphasia): a disturbance in understanding speech.

Dysarthria (dysarthric speech): a disturbance of articulation with an unclear pronunciation (slurred, staggering speech), slow or interrupted speech.

Jargonaphasia: a variety of sensory aphasia with incoherent speech, garrulity and abundance of paraphasiae (literal and verbal).

Logoclonism: a convulsive, interrupted multiple repetition of some syllables or interjections ("ta, ta,, ta, ta," etc.).

Palilalia: a multiple repetition of the last syllable in a word or the last word in a sentence.

Paraphasia: a distortion of certain elements of speech in aphasia (a disturbance in the order of words in a sentence, replacement of some words or sounds with incorrect ones).

Neurotic speech disturbances include aphonia, psychogenic aphonia and stammering.

Aphonia: absence of the sonority of voice with preservation of the whisper speech.

Psychogenic aphonia: aphonia caused by a psychic trauma. Hysterical aphonia is a variety of the psychogenic one.

Stammering: a disturbance in the fluency of speech with appearance of involuntary delays in pronouncing some sounds and syllables or with their repetition.

DISTURBANCES OF INTELLECT

Mental deficiency: a steady decrease in the level of intellect. There are two kinds of mental deficiencies: congenital (**mental retardation**) and acquired (**dementia**).

An acquired mental deficiency is caused by epilepsy, as well as organic diseases characterized by atrophic processes in the cerebral matter (syphilitic and senile psychoses, vascular or inflammatory diseases of the brain, severe brain injuries), schizophrenia.

In schizophrenic dementia any severe disturbances of memory are never observed; a deficiency in schizophrenia concerns the emotional life and thinking in the form of the increasing apathy and splitting, disintegration in the unity and integrity of mental processes.

In epilepsy, a foreground of the picture of dementia contains changes in thinking: excessive thoroughness, "stickiness", stiffness, prevalence of the concrete-descriptive element over the generalizing one.

Lacunar and total dementiae are distinguished. The former is characterized by a decrease in the capacity for work, a progressive loss of knowledge and skills, an irregular weakening of memory, poor judgements, affective instability, loss of flexibility in mental processes, deterioration of adaptability, decrease of self-control. As a rule, the patients critically assess their intellectual defect. But the patient's attitude to the surroundings, his relatives and friends remains like it was before, a sphere of interests undergoes little changes, the convictions formed before are preserved. The personality becomes poor, but preserves its own system of relations, basic moral-ethic properties. In such cases one says about an organic decrease in the level of the personality, formation of "a residual personality".

In total dementia, a complete disintegration of the personality takes place. It is characterized by a sharply expressed narrowness in the sphere of interests coming to satisfaction of the elementary biological necessities. In the first turn, the highest levels of the personality and higher emotional manifestations suffer here. The patients are roughly uncritical to their mental deficiency. In some cases, the lacunar and total dementiae are stages in the development of a pathological process. The clinical picture of cerebral atherosclerosis and syphilis of the brain may demonstrate development of lacunar dementia into total one.

Depending upon the degree of expressiveness, it is customary to divide oligophrenia (congenital mental deficiency) into idiocy, imbecility and debility. Oligophrenia has different causes: hereditary factors (50 % of all cases of oligophrenia); mother's diseases during pregnancy (intoxication, infection); a physical injury of the foetus; a difficult childbirth causing a cerebral haemorrhage or brain injuries in a newborn, etc. Unlike dementia, oligophrenia has no progradency, i.e. a further destruction of the nervous system. In oligophrenia, a regular deficiency of all aspects of the intellect is

most frequently observed, while dementia is characterized by a lack of correspondence between fragmentary remainders of knowledge, testifying to abundance of the person's former experience, and a general decrease in reasonableness and criticism. Moreover, in oligophrenia there is underdevelopment of the whole body rather than of the psyche only.

Patients with a deep degree of idiocy are characterized by absence of speech, they do not recognize the surrounding people, their facial expression is vacant, their attention is almost not attracted by anything; they swallow food without chewing it well. A sharp decrease in all kinds of sensitivity is noticed. Such patients begin to walk late. Their movements are poorly coordinated. They do not respond to other people's facial expression and gesticulation, they are slovenly in relieving nature and are not capable of self-servicing. Sometimes it is possible to observe stereotyped movements, e.g., pendulum-like swings of the head or trunk from side to side.

Idiocy of the moderate and mild degrees is characterized by an ability to laugh and weep, some understanding of other people's speech, facial expression and gesticulation. Such patients are able to fix their look on objects. There is some development of the orientation reflex in them. They can independently eat food, but do it untidily; they may comprehend some simplest situation, and though they orientate themselves in a familiar place, they absolutely lose any orientation in time. Their vocabulary is limited by several dozens of words. They recognize their relatives and friends and may demonstrate an elementary attachment.

In case of **imbecility**, the patient's speech is more or less developed. But its development takes place with a delay, the patients begin to talk during the 3rd-5th year of their life. The stock of words is extremely poor. The patients understand other people's speech, facial expression and gesticulation within the range of their constant use. They do not comprehend a new situation to the end and need help, directions and guidance. They master the simplest skills but display them carelessly. With difficulty, they learn counting up to 20, can learn letters of the alphabet by heart, but are not able to master reading and writing.

Debility is a mild form of oligophrenia. The patients possess a significantly larger vocabulary than in imbecility, but lack flexibility of speech and mostly resort to stereotyped expressions, hackneyed phrases, learned turns of speech. It is not in rare cases that speech defects in the form of lisping and agrammatisms are observed. Differentiated movements are insufficiently developed, but simple forms of labour activity may be mastered. It is possible to teach such patients in conditions of auxiliary school.

Peculiarities of disturbances of thinking in children

Prevailing here are elementary disturbances, mostly of the acute type. A delirium is rare; as a rule, it is unsystematized. The delirium is simple, concrete and unstable. In obsessions, manifestation of the component of struggle is insignificant. The adolescent age is more frequently characterized by delusion-like fantasies, overvalued ideas of invention and dysmorphophobic ideas.

Diagnosis of disturbances of thinking and intellect is established by conversation, observation of the patient, as well as using experimental-psychological techniques (generalization of concepts, exclusion of concepts, comparisons, classification, interpretation of a figurative meaning of proverbs and sayings, an association experiment, explanation of plot pictures, determination of the sequence of events, determination of intellect by Wechsler's technique).

DISTURBANCES OF MEMORY AND ATTENTION

Memory is a mental process of imprinting, preservation and reproduction of the previous experience. Disturbances of memory in mental and somatic diseases manifest themselves by an inability to memorize, retain and reproduce the material mastered. Most frequently, disturbances of memory occur in exogenous-organic (infectious, toxic, traumatic) psychoses and atrophic diseases of the brain. It is possible to observe a reduced capacity for memorizing against a background of a disturbance of attention in cases of development of overstrain states, as well as at the period of convalescence following somatic diseases.

Quantitative and qualitative disturbances of memory are distinguished. The quantitative ones include extreme retentiveness of memory (hypermnnesia), defective memory (hypomnesia) or a complete loss of memory for a certain period (amnesia). Qualitative disturbances of memory (paramnesiae) are represented by cryptomnesia, confabulation and pseudoreminiscence.

Classification of disturbances of memory

I. Extreme retentiveness of memory (hypermnnesia)

1. Fixation
2. Reproductive

II. Defective memory (hypomnesia), loss of memory (amnesia)

1. Fixation
2. Reproductive
3. Retrograde
4. Anterograde
5. Anteroretrograde
6. Progressive
7. Affectogenic

III. Paramnesiae

1. Pseudoreminiscences
2. Confabulations
3. Cryptomnesiae

IV. A disturbance in the sensation of familiarity

1. Symptom of “deja vu”
2. Symptom of “jamais vu”
3. Symptom of one’s own negative and positive double

Hypermnnesia means an extreme retentiveness of memory; most frequently it is observed in maniacal states, sometimes in syndromes of impaired consciousness. It is not in rare cases that hypermnnesia is accompanied by facilitation of the association

process. More frequently, an intensification of the process of reproduction takes place. Thus, in situations endangering their life, people, unexpectedly for themselves, remember episodes from their childhood which were forgotten long ago. Fixation amnesia manifests itself mostly by an extreme retentiveness of the mechanical memory rather than of the logical one.

Hypomnesia means defective memory. Development of hypomnesia begins with relaxation of spontaneous reproduction (reproductive hypomnesia): the patient cannot remember a necessary word or name. Concentration of attention only deteriorates results of the search for a forgotten word, but some time later, when this word loses its urgency for the patient, it arises in the memory as if itself. It is followed by a worsened retaining of information in the memory, after that a progressing insufficiency of remembering is noticed. Hypomnesia is also characterized by an initial defect in the mechanical memory and a longer preservation of the logical, associative memory.

Amnesia, a loss of events that took place in a certain period from the memory, occurs both following the states of disturbances of consciousness and owing to severe organic lesions of the brain. In the first case amnesia usually involves a more distinctly limited period of time.

The following types of amnesia are distinguished.

Fixation amnesia: a loss of the ability to remember, a lack of the memory for current events. Fixation amnesia indicates to severe disturbances of memory, it is observed in senile dementia, Alzheimer's disease, as well as in Korsakoff's syndrome of the infectious, toxic or traumatic genesis.

Fixation amnesia is easily revealed in a conversation. The patient is told his interlocutor's first and second names, asked some irrelevant question and immediately after that requested to repeat the first and second names he has just heard. Inability to repeat indicates to the presence of fixation amnesia. Also, the patient is not able to remember the contents of the book he has just read, what he ate for breakfast, where he has put a thing he needs. Coming to a shop, such patients are unable to remember what they wanted to buy. It is not in rare cases that such patients reveal amnesic disorientation: they cannot name the today's date, month, year, the town where they live, they are not able to find their ward, bed.

Reproductive amnesia: an inability to reproduce the information required at this moment. It occurs in asthenic states, fatigue, anxiety, cerebral atherosclerosis, etc. For example, patients with cerebral atherosclerosis are unable to remember the necessary name, date, term in some crucial situation, but some time later, when the necessity in it passes away, this information may come back to their memory.

Retrograde amnesia: disappearance of some events in the memory which took place a few minutes, days or even weeks before the cause of amnesia (a brain injury, insult, epileptic seizure, poisoning, self-hanging, etc.). For instance, often a person who

received a brain injury as a result of a car accident does not remember the very moment of the accident and also can say nothing about other events of that day preceding the accident, even if after the loss of consciousness he regained it and in outward appearance his behaviour is correct.

Anterograde amnesia is characterized by problems in recalling events which took and take place already after the onset of the disease. Expressiveness of the amnesia often depends upon the extent of the disturbance of consciousness. In deep disturbances (soporific state, coma) the amnesia is of a total character, while a return from delirium is followed by partial, fragmentary amnesia.

If under unfavourable exogenous effects the same patient reveals a combination of anterograde and retrograde amnesia, in these cases the term “**anteroretrograde amnesia**” is used. Retrograde or retroanterograde amnesia is one of the signs of Korsakoff’s syndrome.

Progressive amnesia is a loss of the ability for memorization and a gradually increasing impoverishment of the stock of memory. It is a typical sign of senile dementia. The development of progressive amnesia corresponds to the Ribot’s law: at first, the memory loses the recently acquired information, the patient forgets current events or those which took place recently, while recollections of the events which happened long ago are kept relatively long. Often at this stage of progressive amnesia there is brightening-up of recollections about the patient’s remote past: the patients live by feelings of their childhood and youth, tell about intercourse with their relatives who died long ago. For example, a female patient with senile dementia names the address at which she lived with her parents in childhood, her maiden surname, but does not remember her husband’s surname with whom she has lived several decades. The amnesia spreads from the new to the old, from the recent time to remote past.

Sometimes, amnesia develops in a psychogenic way. Then the patient’s memory loses some definite feelings which were usually hard and unpleasant. In such cases the term “**affectogenic, or catamimic amnesia**” is used.

Qualitative disturbances of recollections (paramnesiae) designate changes in the contents of recollections.

Cryptomnesia: a distortion of the memory manifested by disappearance of differences between the real events and those ones which were seen in sleep, heard or read by the patient. In cryptomnesia, the disturbances may be both by the type of appropriation and alienation of the recollections. In the first case, somebody else’s ideas or creative work, once perceived by the patient, are realized as his own, new, original. For instance, a patient may tell his interlocutor a story which he has heard himself from this person a few minutes before. In the other case, the patient may assess the events, whose participant he really was, as if they were read about or seen in a film.

Cryptomnesia also includes reproduction of somebody else's thoughts as the patient's own ones, it sometimes resulting in an unrealized plagiarism.

Confabulations: false recollections with some fantastic contents, recollections of the events which did not and could not happen in the patient's life ("hallucinations of memory"). In confabulations, spotty memory defects are filled with fiction; the patient "recalls" what has never occurred in reality. For example, a female patient, who has been ill with cerebral insult, says that last week she was "launched into space" from a mountain which she describes, she states that she left there her slippers and remembers that she was very cold during the flight. Confabulations are usually picturesque, amorphous, unstable, by their plot they may resemble reality or have some evidently fantastic contents. Confabulations are observed in organic diseases of the brain (vascular lesions of the central nervous system, injuries, intoxications, infections, e.g., in cerebral syphilis) against a background of hypomnesia. Together with the fixation, antero- and retrograde amnesiae they are structural components of Korsakoff's syndrome.

Pseudoreminiscences are false recollections of the facts which did not take place at this period, but were or could be in the patient's past life ("illusions of memory"). Unlike confabulations, they are more stable and repeatedly mentioned by the patient. Pseudoreminiscences are characterized by distorted recollections of the time or place of real events. For example, when a male patient, who has been staying at a mental hospital for several months, is asked what he did a day before, he "recalls" that he was at home and lists different things which he allegedly made.

Disturbances in the sensation of familiarity

Disturbances in the sensation of familiarity comprise a specific group among the symptoms of disturbances of memory. In such cases, disturbances of memory may be accompanied by a pathology of perception, emotions, consciousness.

The symptoms of "deja vu" ("already seen") and "jamais vu" ("never seen") are distinguished. The symptom of "deja vu" comes to the thing that seeing something for the first time in his life the man feels as if it already happened to him some time before. It is accompanied by a critical understanding of the erroneous nature of this sensation. Thus, having come to a strange town for the first time, a person walks along its streets with a feeling as if he has already been here.

The symptom of "jamais vu" consists in the fact that something well familiar is perceived as strange, alien, as if seen for the first time. The criticism remains preserved, the person realizes the fact of the disturbance, he understands that it only seems to him, the knowledge of the phenomenon itself remains unchanged too. Thus, once entering his room the man actually does not recognize it, though he knows well all the peculiarities of the premise and its furniture.

Capgras' syndrome (named after J.M. Capgras) is manifested by a disturbance in recognizing people. The following syndromes are distinguished: **the syndrome of a positive double**, when the patient regards unfamiliar people as his friends, and **the syndrome of a negative double**, when the patient does not recognize his relatives and acquaintances, considers them as dummies, twins, doubles of his relations.

Fregoli's symptom is a variety of Capgras' syndrome: such patients believe that their "persecutors" change their appearance in order not to be recognized by anybody.

Disturbances in the sensation of familiarity usually accompany psychosensory disorders and are revealed in the structure of the syndromes of depersonalization and derealization. Most frequently, these disturbances are observed in patients with encephalitides, brain tumour, consequences of a brain injury, in epilepsy, schizophrenia, manic-depressive psychosis.

Peculiarities in the patient's memory can be assessed with help of the clinical-psychopathological method: in the process of a conversation the physician checks his memory for recent and remote events asking special questions. It is necessary to check the memory for commonly known historic events. In order to assess short memory, the physician may suggest that the patient should remember and then repeat a phrase or a short story.

If the patient has paramnesiae, in a conversation with him the physician reveals contradictory answers, uncoordinated with one another. In order to facilitate detection of paramnesiae, it is possible to ask some leading questions which contain an element of suggestion. Thus, asking the patient how long ago we saw him last time we thereby cause in him a false idea that we already saw each other once. A positive answer demonstrates presence of false recollections in the patient.

When assessing the state of memory, it is necessary to take into consideration the patient's general state; e.g., in depression, patients may complain of defective memory and demonstrate its reduction caused by narrowing of the sphere of interests and reduced concentration of attention. In this case it is necessary to carry on an additional experimental-psychological study of the memory.

Presence of confabulations and pseudoreminiscences always indicates to a significant impairment of the memory. If the patients are inclined to false recollections, it is possible to receive answers which even contradict to one another rather than only do not conform to one another. It may happen that in his answers to the questions containing an element of suggestion in itself, the patient does not give a positive reply, but at the same time he does not decline the question, does not point out its groundlessness and tries to find some corresponding recollection. It shows that the patient is not sure in his recollections, he has defective memory. In an old age, false recollections are of the character of recollections whose development is not spontaneous but results from some prompted questions or a called direction of thoughts. For

instance, we ask about some letter, and it reminds of a letter received, though the patient did not receive any letters.

The technique of investigating disturbances of memory in the hospital for psychoses presupposes such a form of its performance that it should not resemble an examination. Wherever it is possible, the physician should emphasize the medical character of the study. Usually, after some introductory phrases, the patient may be asked about the state of his memory, and after his answer the physician may pass to the investigation, making it delicately and carefully in order not to grieve the patient. For instance, it is possible to ask if he knows the first and second names of his physician, and after the answer that he does not know tell him these names and ask to remember them; then the patient may be asked one or two other questions, e.g., about the name of his wife and the number of his children, after receiving his answers it is possible to ask again if the patient remembers his physician's first and second names. If the patient does not remember them, he may be asked if he has been informed today about the first and second names of his physician. Naturally, in cases of disturbances of memory it is necessary to repeat studies of this type from time to time.

Some patients refuse to undergo investigations of their memory, as they are afraid to reveal its disturbance. In such cases the physician asks questions concerning recent feelings, for example, if the patient remembers what has recently happened to him, what he has eaten for breakfast today, whether he was visited by his relatives, when he saw his physician last time. And if the patient is not able to recall what his physician talked to him about or who visited him, whether he was given an injection, how much time he has been staying at the hospital, or at different times gives different answers to the same questions, a conclusion about some pathology of his memory can be made.

In order to investigate the state of memory, experimental-psychological techniques are used: from the simplest methods (tests for memorization of words, repetition of increasing lines of figures in the direct and reverse order after an interlocutor) to rather complex techniques requiring some experience in their use (Wechsler's memory scale, Benton's test for visual retention).

DISTURBANCES OF ATTENTION

Attention is concentration of consciousness on a chosen object or phenomenon, as a result this object or phenomenon is reflected clearer.

Distractibility of attention: inability to concentrate on one kind of any work and objects, sometimes in combination with increased attention to some unessential things.

Rivetting of attention: a reduced ability to switch attention, sticking to the same thoughts, desires. It is characterized for depressions, the patients are unable to switch to any thoughts and events which do not correspond to their feelings.

Exhaustibility of attention: in the beginning of a conversation the patients are adequate, but rapidly get tired and their answers become less productive. It is typical for asthenic states.

DISTURBANCES OF EMOTIONS

Emotions (from Latin “to excite, to agitate”) are responses in the form of subjectively tinted feelings of an individual which reflect significance of an acting stimulus or a result of his own act for him (pleasure, displeasure).

Mood: a prolonged emotional state which does not reach any significant intensity but tincture all mental processes during several hours or days; the emotional tone may be both positive and negative.

Affect: a short-term, wild emotion accompanied by excitation of the whole psychic activity rather than by an emotional response only.

Physiological affect appears under the effect of strong stimuli, it is characterized by some one-sidedness of thinking and a stormy motor response which, nevertheless, are controlled by the consciousness (a person preserves an ability to be aware of his actions and control them). The physiological affect is not accompanied by any cloudiness of consciousness, automatisms, amnesia. It is most frequently observed in asthenic states.

Asthenic affect: a rapidly weakening affect accompanied by depression, a reduction in psychic activity, general state and vitality.

Sthenic affect is characterized by a good general state, an increased psychic activity, a feeling of one’s own strength.

Pathological affect appears in response to an outwardly insignificant cause; it is characterized by a wild emotional response with a disturbance of consciousness (its twilight state), a motor excitement with destructive actions, a sharp autonomic response.

Passion: a strong, steady and deep feeling that embraces the whole person and overrides the main directions in his thoughts and activity.

Classification of disorders in emotions and feelings

1. Disorders in the strength of emotions.

1) Pathological strengthening:

- a) hyperthymia
- b) euphoria
- c) hypothyria
- d) ecstasy
- e) depression
- f) alarm
- g) irefulness

2) Pathological weakening:

- a) paralysis of emotions
- b) apathy
- c) emotional flattening

d) emotional bluntness

2. Disorders in the motility of emotions:

1) faint-heartedness (unrestrained emotions)

2) lability

3) inertness (stickiness) of emotional feelings

4) explosiveness

3. Disorders in the adequacy of emotions:

1) inadequacy

2) ambivalence

3) phobiae

4) dysphoriae

5) dysthymiae

6) pathological affect.

Hyperthymia: a merry, joyful mood accompanied by a surge of cheerfulness, an excellent general state, easiness in solving problems. It is accompanied by a lively and rapidly changing facial expression which reflects a picture of rapidly appearing and disappearing emotions.

Euphoria: pathologically high spirits, often appearing without any connection with the surrounding reality and the physical state of the patient himself.

Moria is characterized by a combination of high spirits with a disinhibited drive, foolishness, stupid and incongruous jokes, sometimes against a background of obnubilation of consciousness.

Hypothymia: low spirits, a feeling of depression, melancholy, inconsolability. The attention is concentrated only on negative events; the present, past and future are perceived only in dark colours.

Depression: a pathologically depressed, melancholic, sad mood, deep grief, low spirits. It is often accompanied by various physical painful feelings, a sensation of difficulty in breathing, heaviness in the heart region (precardiac melancholy).

Alarm: a feeling of internal anxiety, expectation of some trouble, misfortune, catastrophe. The feeling of alarm may be accompanied by a motor anxiety, autonomic responses. The alarm may grow into panic, when the patients rush about, fret or are paralysed with horror expecting a catastrophe.

Irefulness: the highest extent of irritability, maliciousness, dissatisfaction with the surrounding people accompanied by an inclination to aggression and destructive

actions. It is a structural component of dysphoria, twilight states of consciousness, the psychoorganic syndrome.

Apathy: a weakening of emotions, a painfully felt indifference to the surroundings and the patient's own behaviour. The patients are not interested in the surroundings, do not express any wishes. It is usually accompanied by a sharp reduction in the mental, volitional activity. It may be observed in intoxications, after cranial injuries and infectious diseases.

Emotional flattening consists in a loss of fine differentiated emotional responses: delicacy and the ability to feel for other people disappear. The patients become importunate and impudent. It is observed in alcoholism and narcomaniae.

Emotional bluntness: a steady and absolute indifference, particularly to sufferings of other people. Weakening of emotional manifestations involves both higher and lower emotions connected with instincts. Such patients are indifferent to their disease, they do not suffer on the occasion of diseases and deaths of their parents and children.

Paralysis of emotions: a feeling of an absolute spiritual bankruptcy and indifference developing under the effect of sudden severe psychic traumas. Usually it is of a short-term character.

Lability of emotions: an easy change of emotions, a rapid transition from one emotion to another accompanied by a significant expressiveness of emotional responses. It is usually observed in hysterical psychopathy.

Faint-heartedness, emotional weakness is manifested by an unstable mood, "unrestrained" emotions, when the person's ability to control his feelings is weakened. It is particularly difficult for such patients to restrain tears in the moments of tender emotions, a sentimental mood.

Rigidity (inertness) is characterized by a protracted stickiness to some emotion whose cause has already disappeared. It is a structural component of epileptic changes of the personality, the psychoorganic syndrome.

Explosiveness: a failure to restrain affect. It is revealed in dysphoriae and manifested by strong emotional and sometimes motor responses, which are not adequate to their cause.

Inadequacy of emotions: a lack of correspondence between emotional responses and external situations, which caused them, or statements made by the patient himself. It is most frequently observed in schizophrenia.

Ambivalence: a simultaneous development of two contradictory feelings (e.g., love and hatred) to the same object. It is usually observed in schizophrenia.

Phobiae: morbid fears, characterized by the patient's critical attitude to them, his yearning for getting rid of them (for instance: the morbid fears of height, open spaces, infections, etc.). More frequently, they accompany other fixed states (thoughts, drives,

actions) in patients with the compulsion neurosis, sometimes in the initial stages of atherosclerosis, in schizophrenia.

Varieties of morbid fears (phobiae)

- Agorafobia: a morbid fear of squares, broad streets.
- Aerophobia: a morbid fear of some moving air.
- Acarophobia: a morbid fear of catching scabies.
- Algophobia: a morbid fear of pain.
- Astrophobia: a morbid fear of thunder and lightning.
- Vertigophobia: a morbid fear of having vertigo.
- Vomitophobia: a morbid fear of having vomiting.
- Haematophobia: a morbid fear of blood.
- Hydrophobia: a morbid fear of water.
- Gynaecophobia: a morbid fear of women.
- Claustrophobia: a morbid fear of close spaces, small rooms.
- Nyctophobia: a morbid fear of darkness.
- Nosophobia: a morbid fear of disease.
- Cancerophobia: a morbid fear of falling ill with cancer.
- Syphilophobia: a morbid fear of falling ill with syphilis.
- AIDS-phobia: a morbid fear of falling ill with AIDS.
- Radiophobia: a morbid fear of falling ill with a radiation-induced disease.
- Oxiphobia: a morbid fear of sharp objects.
- Octophobia: a morbid fear of food.
- Thanatophobia: a morbid fear of death.
- Phobophobia: a morbid fear of fears.

Dysthymia: a short-term (during several hours or days) mood disorder in the form of anxious depression with irreflexivity, displeasure, irritability.

Dysphoria: a suddenly appearing and unmotivated disorder of emotions characterized by a strained, depressed and malicious mood with an expressed irritability and inclination to affects of anger with aggression. It is most frequently observed in epilepsy, it also takes place in organic diseases of the nervous system and psychopathy of the excitable type.

Hypermimia: manifestation of mimic responses is exaggerated, wild and vivid. Expressive movements are intensified, accelerated and rapidly change.

Amimia, hypomimia: impoverishment of facial expression, a set expression of the face. Expressive movements are delayed.

Paramimia: inadequacy of the facial expression and expressive movements to the situation. In some cases it is manifested by a smile at a funeral, tears and grimaces, crying during ceremonial and pleasant events.

Methods of investigation of emotions

It is necessary to take into consideration the patient's subjective report about his mood, an observation of his facial expression and pantomimics, the state of autonomic functions. The physician should pay attention to the quality of sleep and appetite, the size of the pupils, moisture of the skin and mucous membranes, heart rate, blood pressure values.

Besides the clinical examination, experimental-psychological methods are used (the topical aperceptive test, Rorschach's method, Rosenzweig's method, etc.).

DISTURBANCES IN EFFECTOR-VOLITIONAL SPHERE

The effector-volitional sphere consists of two main components: a) *effector*, or *motor* (simple and complex movements, actions and acts), and b) *volitional* (an ability for a conscious and purposeful control of one's own activity and acts).

Classification of purposeful activity

1. Voluntary, or complex volitional actions.
2. Automated actions.

Classification of instinctive drives

1. Food.
2. Sexual.
3. Self-preservation.

Instinct is the most complex chain unconditioned reflex directed at satisfaction of biological requirements of the organism (food, sexual, self-preservation). It may include simpler actions of an involuntary character.

Voluntary actions: realized purposeful volitional actions based on the past experience and directed at adaptation of the human being to the environment, at achievement of some task consciously set as an object.

Automated actions are simple and complex motor acts, which are voluntary by their origin, but in the process of training acquire an automated character not controlled by the consciousness.

Disorders in the effector-volitional sphere

Classification of effector-volitional disturbances

I. Disturbances of drives

1. Disturbances of food drives:

- a) intensification (bulimia, polyphagia)
- b) weakening (anorexia)
- c) polydipsia
- d) perversion: parorexia (coprophagy, etc.)

2. Disturbance of the instinct for self-preservation:

- a) intensification (active-defensive form: aggressiveness, etc.; passive-defensive form: "an imaginary death", etc.)
- b) weakening (suicidal acts)
- c) perversions (self-torture)

3. Disturbances of sexual drives:

- a) intensification (hypersexualism: satyriasis, nymphomania)
- b) weakening (hyposexualism, frigidity)

c) perversion (narcissism, exhibitionism, voyeurism, transsexualism, transvestism, onanism, fetishism, sadism, masochism, pedophilia, gerontophilia, homosexuality, etc.)

4. Obsessive actions

5. Forced actions

6. Impulsive actions

II. Disturbances of volitional motives

1. Hyperbulia

2. Hypobulia

3. Abulia

4. Parabulie

5. Ambivalence

III. Disturbances of attention

1. Distractibility

2. Rivetting

3. Exhaustibility

IV. Psychomotor disturbances

1. Signs with difficult motor activity:

a) catalepsy

b) hood sign

c) passive-subjected state

d) negativism

e) mutism

f) specific disorders in the development of school skills (dyslexia, dysgraphia, dyscalculia, acalculia, dyspraxia)

2) Signs with excitement and inadequacy of motor activity:

a) hyperkinetic disorders

b) impulsiveness

c) stereotypies

d) echopraxia

e) verbigeration

f) miss-speech

V. Syndromes of motor disturbances

1) Stupor:

a) catatonic

b) depressive

c) apathetic

d) psychogenic

2) Excitement:

a) catatonic

b) maniacal

c) hebephrenic

d) hallucinatory-delirious

e) in disturbances of consciousness

Disturbances of drives:

Bulimia and **polyphagia** result from a morbid enhancement of the food instinct (drive) characterized by a constant overmastering strong desire for food, voracity and an absence of the sensation of satiation. They are observed in organic lesions of the brain, endocrine disorders.

Anorexia: a morbid oppression of the food instinct (drive) expressed in absence of appetite or aversion for food. It may be of the psychogenic origin (psychogenic anorexia). It should be differentiated from a refusal to eat caused by hallucinations or delusions. Anorexia is observed in depressive, severe asthenic states and a number of endocrine disorders.

Polydipsia: unquenchable thirst, an increased consumption of fluid. It is typical for endocrine diseases.

Perversion of the food instinct (drive) is manifested by eating inedible substances (earth, slaked lime, faeces, etc.). It is observed mostly in schizophrenia, organic lesions of the brain.

Intensification of the instinct for self-preservation may be basically manifested in two contradictory phases: a) passive-defensive (a striving for avoiding dangerous, complex situations and responsible decisions, timidity, indecision, cowardliness, responses of “an imaginary death”, etc.), and b) active-defensive (responses of protest, various kinds of aggression, etc.). It is observed in complex forms of behaviour in psychopathies, neuroses and other morbid states.

Weakening of the instinct for self-preservation is manifested in a reduction of the interest, i.e. indifference to one's own life, and in suicidal acts (particularly combined with the depressive affect). It is observed in psychopathy, psychogenic diseases, schizophrenia, the manic-depressive psychosis, etc.

Perversion of the instinct for self-preservation is manifested in acts of self-torture, inflicting various mutilations to oneself, swallowing metal and other objects, etc. It is observed in schizophrenia, organic lesions of the brain, psychopathies, etc.

Hypersexualism: an excessive sexual drive with corresponding behaviour, which sometimes acquires the character of sexual dissoluteness (satyriasis in males, nymphomania in females).

Hyposexualism: lessening of sexual drive (some forms of impotency in males, frigidity in females) with absence of sexual feelings to people of the opposite sex. Its origin may be different (psychogenic and endocrine-organic).

Sexual perversions are disturbances of the sexual instinct manifested in perversion of its direction or forms of its manifestation. They are observed in oligophrenia, dementiae, psychopathy and a number of other morbid states; rather often their manifestations result in sexual offences.

Varieties of sexual perversions are as follows:

- a) **narcissism:** finding sexual satisfaction in self-admiration, admiration with one's own naked body;
- b) **exhibitionism:** finding sexual satisfaction in exposing one's own genitals and sometimes masturbation in presence of people of the opposite sex;
- d) **fetishism:** finding sexual satisfaction by means of admiration with a fetish (a toilet article of people of the opposite sex, etc.), sometimes in combination with masturbation;
- e) **sadism:** finding sexual satisfaction in torturing one's sexual partner;
- f) **masochism:** the opposite phenomenon (sexual satisfaction while receiving pain stimuli from the partner);
- g) **pedophilia:** a sexual drive (and its satisfaction) towards children; **gerontophilia:** the same towards old people; **necrophilia:** a drive towards corpses; **zoophilia:** a drive towards animals;
- i) **transsexualism:** a disturbance in the sexual identification, a constant feeling of the inadequacy of one's own sex and an active yearning for changing it;
- j) **transvestism:** a pathological stable striving for wearing clothes, having haircut/coiffure, playing the part of a person of the other sex, but it is not characterized by any striving for an anatomical change of one's own sex or a wish to get rid of the primary and secondary sexual characters;
- k) **voyeurism:** a drive for viewing somebody else's genitals and spying sexual intercourses between other people.

Obsessive actions and drives: these are suddenly appearing drives and actions which are alien to the contents of the consciousness at the given moment, with a critical attitude towards them and a yearning for getting rid of them.

Obsession Classification

Ideator obsessions	Obsessive drives (mania)	Obsessive fears (phobias)	Obsessive actions
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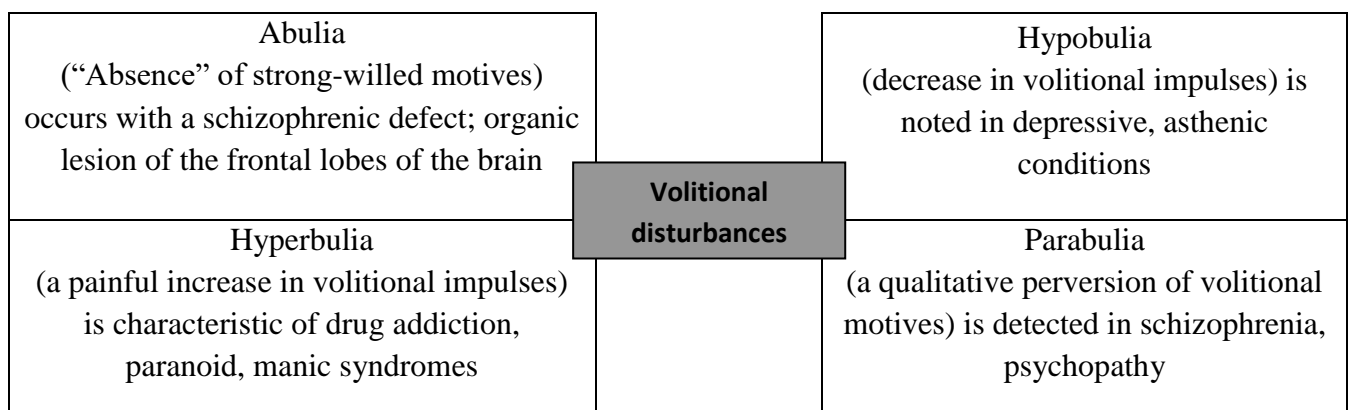
Obsessive: - thoughts - memories - representation	(in the presence of a “struggle of motives”) - kleptomania - pyromania - dromomania - suicidomania	- agoraphobia - claustrophobia - nosophobia - gypsophobia - phobophobia and etc.	- not compatible with phobias - combined with phobias (rituals)
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Forced actions: actions or acts appearing without one’s own will, irrespective of the personality; they are fulfilled without any struggle of motives, with a feeling of their forced and alien character.

Impulsive actions: sudden, outwardly unmotivated, meaningless actions and acts. They include:

- a) dromomania – a periodically appearing yearning for a change of places, vagabondage;
- b) kleptomania – a periodical drive for unmotivated stealing, thieving;
- c) pyromania – an overmastering desire for arsons;
- d) a pathological inclination to gambles;
- e) trichotillomania – a pathological desire for pulling out one’s own hair;
- f) dipsomania – an overmastering desire for alcoholic drinks;
- g) narcomania – an overmastering desire for narcotics.

Parabulia: a perversion of the volitional activity accompanied by a corresponding activity, negativism, impulsiveness, pretentiousness owing to the psychotic symptoms the patient has (delirium, hallucinations, etc.).



Ambivalence: a double contradictory response to the same stimulus, a duality of acts, actions, movements.

Disturbances of volitional motives:

Hyperbulia: a pathologically intensified desire for activity (general – in hypomaniacal and maniacal states, unilateral – in drug addicts, in paranoid and paranoiac states).

Hypobulia and **abulia:** a morbid decrease or an absolute absence of any motive for activity. They are observed in the apathoabulic syndrome of various genesis (in schizophrenia, severe injuries, etc.).

Distractibility of attention: inability to concentrate on one kind of any work and objects, sometimes in combination with increased attention to some unessential things.

Rivetting of attention: a reduced ability to switch attention, sticking to the same thoughts, desires. It is characterized for depressions, the patients are unable to switch to any thoughts and events which do not correspond to their feelings.

Exhaustibility of attention: in the beginning of a conversation the patients are adequate, but rapidly get tired and their answers become less productive. It is typical for asthenic states.

Psychomotor disturbances:

Catalepsy: an increase of the muscular tone creating an ability for keeping a given posture long.

The hood sign: the patient lies or sits immovably, having pulled a gown or a sheet on his head and leaving his face open.

Passive subjection: having the usual muscle tone, the patient does not resist to changes in the position of his body, posture, extremities.

Negativism: the patient's resistance to requests made by the surrounding people. In the *passive* negativism, the patient simply does not follow an instruction, in the *active* one he makes an action contrary to the instruction.

Mutism: absence of speech with preservation of the speech apparatus.

Dyslexia: difficulties in recognizing words and understanding the written speech.

Dysgraphia: an isolated disorder of spelling. The written speech is characterized by a large number of grammatical and stylistic mistakes, in many places the text is crossed out and rewritten.

Dyscalculia, acalculia: difficulties in making the simplest arithmetical operations, in using mathematical terms, in recognizing figures and mathematical symbols.

Dyspraxia: a disturbance in the development of the motor functions (awkwardness, clumsiness of movements and fine motility, it is difficult to button up the clothes, take objects without dropping them, children often fall down in the process of walking).

Hyperkinetic disorders are more frequently observed in boys at the prepubertal age. Their main signs are as follows:

1) a disturbance of attention (inability to fulfill any task without mistakes, to put a finish to any work begun, to organize one's own work, to listen to reproofs made by older people, the patients refrain from any work requiring assiduity);

2) hyperreactivity (the patients wave their arms and legs, often fidget on seats, cannot stay in one place long, run, make noises, do not respond to reproofs);

3) impulsiveness is manifested by violations of discipline, as the child is unable to foresee consequences of his acts; the children are often aggressive; they would answer a question without having listened to its end, they cannot wait for their turn in games, interfere in talks or games of other children, are too garrulous and disobedient.

Stereotypy: a multiple repetition of the same movements.

Echopraxia: repetition of gestures and movements made by the surrounding people.

Echolalia: repetition of words and phrases said by the surrounding people.

Verbigeration: repetition of the same words.

Miss-speech: the patient's answers do not correspond to the meaning of the questions asked to him.

Variants of psychomotor excitement and stupor:

General psychomotor excitement: a state of a pathological motor excitement accompanied by disturbances of thinking, emotions and other psychic functions.

Maniacal excitement: an increased motor activity, a yearning for some purposeful activity accompanied by euphoria, rapid and superficial thinking. The activity and thinking are not productive owing to instability of attention. It is typical for the maniacal syndrome.

Hebephrenic excitement: an increased motor activity in the form of purposeful, fanciful, awkward movements in combination with foolishness and non-continuous thinking (the hebephrenic syndrome). It is observed mostly in schizophrenia.

Catatonic excitement: senseless, purposeless movements, sometimes an impulsive excitement with unmotivated aggression; it is accompanied by stereotypies (stereotyped "hyperkineses"), echopraxiae (repetition of movements made by the surrounding people), echolaliae (repetition of words said by the surrounding people) and ambivalence (a duality of acts, actions, movements). It is observed mostly in schizophrenia.

Psychomotor excitement in states of disturbed consciousness: the states of an increased motor activity which is characterized by: 1) complex automatic and instinctive movements (in trance and somnambulism), 2) complex actions and acts caused by hallucinatory and delirious feelings (in the delirious and other syndromes), 3) a chaotic subcortical excitement (in a deep cloudiness of consciousness).

General psychomotor inhibition: a state of a pathological motor inhibition with a slowed rate in the course of all psychic functions (thinking, speech, etc.). It is a structural component of the depressive, apathoabulic and asthenic syndromes.

Stupor: a state of immobilization resulting from an inhibition of the motor functions.

Catatonic stupor: an absolute or partial immobilization accompanied by a passive or active negativism and mutism. In some cases, the patients keep a given posture (wax flexibility, catalepsy), keep their head over a pillow long (“an air pillow”). It is a structural component of the catatonic syndrome, it is more frequently observed in schizophrenia.

Depressive stupor: a state of immobilization accompanied by slow speech, a feeling of melancholy, sometimes alarm and fear, a set suffering facial expression, ideas of self-condemnation and self-humiliation. It is a structural component of the depressive syndrome.

Apathetic stupor: a state of immobilization accompanied by an emotional bluntness and absolute indifference observed in organic lesions of the brain (an impairment of the frontal lobes), in some forms of schizophrenia.

Psychogenic stupor: a general immobilization up to an absolute rigidity which appears in strong sudden psychic traumas (catastrophies, natural calamities, etc.)

DRIVING DISORDERS		
Weakening	Increased drives	Perversion
- anorexia - hyposexuality	- bulimia - polydipsia - hypersexuality	- polyphagia - suicidomania (*) - kleptomania (*) - dromomania (*) - pyromania (*) - ambitiousness - negativism - sexual perversions - cannibalism

* - in the absence of a “struggle of motives”

DISTURBANCES OF CONSCIOUSNESS

Consciousness is an integrative sphere of the psychic activity, the highest form of reflecting the objective reality, a product of a long historical development. With appearance of the consciousness, the human being received an ability to isolate himself from the nature, cognize it and master it. The consciousness is realized by means of the language, the words which form the second signal system. The individual consciousness is formed in the process of the man's mastering socially produced representations, concepts and norms.

It is worth mentioning that there are physiological changes in the consciousness which appear in fatigue, during sleeping, in emotional-stressful situations.

Fatigue: a state of tiredness which appears after some physical or mental overstrains and is accompanied by a higher excitation threshold. Outwardly such a person looks inhibited, his responses to stimuli are delayed, the speech is meagre, the answers after a pause consist of one word. Some difficulty in the process of memorization is noticed, the attention is hardly attracted, the rate of thinking is delayed, the facial expression is not expressive, the person is apathetic. The state of fatigue does not require any drug treatment, it disappears spontaneously after some rest and sleep. Recollections of it are fragmentary, usually only of the strongest stimuli.

Sleep with dreams: it is a normal physiological state of man and animals, necessary for them as much as food; it is a manifestation of the instinct for self-preservation. Sleep is a functional state of the brain and the whole organism; it is characterized by an incomplete inhibition of the psychic activity and a reduced active cooperation with the environment. There are several theories for origination of the sleep and its functional significance. They are: the theory of a diffuse cortical inhibition, the anabolic theory considering the sleep as a state that facilitates renovation of energy stores in the brain and the organism at large; the information theory according to which during the sleep some information is fixed in the prolonged memory without processing. The sleep contributes to a valuable use of the acquired information and experience in the interests of the activity in which the person is involved in the state of wakefulness.

By their physiological manifestations, two phases of the sleep are distinguished: fast and slow. The moment of falling into the stage of the slow sleep is characterized by deceleration of the breathing and heart rate, reduction of the blood pressure and muscle tone. In the deep stage of the slow sleep the rates of respiration and pulse become slightly increased, while the general motor activity of the sleeping person becomes minimum, it is difficult to wake him at this moment.

During the fast sleep, the activity of the cardiovascular and respiratory systems is sharply intensified, the blood pressure becomes higher, the motor activity of the

sleeping person increases, movements of the eyeballs become rapid thereby testifying that at this moment the sleeping person sees dreams. In people, the sleep is of a cyclic character. Each cycle consists of separate stages of the slow and fast sleep. The duration of one cycle is 1.5-2 hours, every night up to 3-5 cycles are observed. During a night the depth of sleep is not the same and depends upon individual peculiarities and the state of the organism. In some people an inhibition of the cerebral cortex develops rapidly and the deep sleep comes in the first half of the night, while in others, on the contrary, the sleep is at first superficial and later becomes deep. As a rule, the superficial sleep is accompanied by dreams. Dreams are imagery representations which appear at the time of sleeping and are perceived by man as reality. The contents of dreams reflects some past events and feelings of the person, as well as the information which precedes the sleep and perceived in a distorted form. The contents of dreams may be influenced by a possible direction before the sleep rather than only by light, smell and ambient temperature.

Physiologically, dreams are based on an incomplete inhibition of the cerebral cortex, some parts of which remaining disinhibited. A rapid change of dreams is caused by a chaotic state of the processes of excitation and inhibition. The ancient people were not absolutely wrong when they said about prophecy of dreams. Sometimes they really could have a foretelling character. At the onset of a disease, impulses from an affected area of the body sometimes may be so weak that they are not fixed in the consciousness. In the state of sleep these impulses come to the cerebral cortex which is at the hypnotic phase, when weak external and internal factors are more significant than strong ones. Dreams in such cases are the first signals of a disease.

Besides, dreams are also characterized by activation of unrealized forms of the psychic activity. It may explain the known facts of scientific discoveries made in sleep (D.I. Mendeleev's discovery of the periodical table of elements).

From the viewpoint of physiology, dreams may be caused by the same material processes which are responsible for appearance of the psychic activity in the state of wakefulness.

Affectively narrowed consciousness, or the physiological affect: an emotional state which does not exceed the limits of the norm and is a short-term, swiftly and wildly passing emotional explosive response accompanied by sharp changes in the psychic activity (consciousness included), marked autonomic and motor manifestations. They are fragmentary recollections of dreams, a strong and short-term feeling in the form of anger, fury, horror, delight, despair without a loss of self-control. The physiological affect is an extraordinary response of the personality to exceptional circumstances. It is followed by a change of the psychic activity in the form of

fragmentation of the perception, narrowing and concentration of the consciousness on the object which traumatizes the psyche. The vividly manifested signs of an emotional excitement (a change of the appearance, facial expression, pantomimics, voice) reflect physiological, biochemical shifts in the organism. Affective actions are notable for stereotypies, impulsiveness, a sharp reduction of the intellectual and volitional control, a disturbed ability to prognosticate possible consequences of one's own actions. Appearance of some forms of behaviour which were not peculiar to the subject before is one of the important signs of the physiological affect; here the behaviour comes in conflict with the basic life directions and value orientations of the personality, acquiring features of an involuntary and situational character.

All the syndromes of the cloudiness of consciousness have a number of common signs:

- Estrangement from the surrounding world. The real world, any events and changes that take place in it do not attract the patient's attention; even if they are perceived by him, it is only in a fragmentary and inconsistent way. The ability to realize and comprehend phenomena of the surrounding life is weakened or, sometimes, absolutely lost.
- Disorientation in one's own personality, place, time, situation, surrounding persons. Being one of the leading signs in any disturbance of consciousness, the allo- and autopsychic disorientation in each particular case has characteristic peculiarities in its structure, expressiveness and development.
- The thinking is sharply destroyed, the speech becomes fragmentary, inconsistent and incoherent.
- Disturbances of memory are observed. After a return from the state of a disturbances of consciousness, recollections are always incomplete, fragmentary, inconsistent, in some cases they are absent.

A practical task of any physician is to reveal a pathology of consciousness (an important mental process) and give qualified medical aid.

The consciousness is regarded as **clear** if the subject is able to orientate in his own personality, place, time, situation, surrounding persons and at the same time he has no disturbances in any mental sphere.

Disturbances of consciousness are classified in the following way:

1. Non-psychotic (non-productive) forms (disengagement of consciousness)
 - 1) Obnubilation
 - 2) Torpor
 - 3) Somnolence
 - 4) Sopor

- 5) Coma
2. Psychotic (productive) forms accompanied by delirium, hallucinations, a disturbance in behaviour
 - 1) Delirious syndrome
 - 2) Oneiroid syndrome
 - 3) Syndrome of asthenic confusion
 - 4) Syndrome of perplexity
 - 5) Amentia
 - 6) Twilight state of consciousness
 - a) with outwardly regulated behaviour – a simple form (ambulatory automatism, somnambulism)
 - b) psychotic form
 - c) pathological affect
 - d) pathological intoxication
 - e) prosomniac state
 - f) “short-circuit” response
 - g) hysterical twilight states (puerilism, pseudodementia, Ganser’s syndrome)

Disengagement of consciousness: a total disturbance of reflection accompanied by an instantaneous or consecutive reduction, and sometimes an absolute disappearance, of the scope and depth of the whole psychic activity. At first, the cognitive ability is narrowed and gradually decreased, the logic is disturbed; then it is accompanied by a disturbance in the sensual-imagery reflection of the surrounding reality that becomes deeper. It is followed by the dying away of the conditioned reflex activity of the organism. In the last turn, the unconditioned reflex functioning of the organism, which ensures the basic vital functions, is disrupted; as the functions are dying away, the death comes.

Torpor: a decrease in the clarity of consciousness down to its absolute disappearance with a simultaneous impoverishment of its contents. It is characterized by two main signs: a higher excitation threshold for all the stimuli and an impoverishment of the psychic activity. The patients do not respond if they are addressed in a low voice, common stimuli elicit only a weak orienting response (the patient may open his eyes, turn his head towards a voice), and only a strong stimulus may evoke an adequate but delayed response through speech, facial expression and motor activity. Such patients do not complain of any noise, they do not respond to other inconveniences (a damp bedding, a too hot heater, etc.), they are apathetic, the surroundings do not attract their attention, their facial expression is meaningless, the thinking is retarded and difficult.

The speech is meagre, the answers consist of one word. The motor activity is reduced, the movements are slow and awkward. Some impoverishment in the facial expression responses is observed. Disturbances in the memorization and reproduction are marked, the patients look as if they dozed. Usually, the period of torpor is absolutely or almost absolutely forgotten.

Depending upon the extent of a decrease in the clarity of consciousness, the following stages of torpor are distinguished:

- obnubilation;
- somnolence;
- sopor;
- coma.

Obnubilation: “a veil on consciousness”, “a cloud on consciousness”; it is characterized by twinkling in the clarity of consciousness. The patients’ responses, first of all speech ones, are delayed, the patients develop absent-mindedness, inattention, mistakes in answers. Some carelessness of the mood is observed. Such patients resemble a person in a state of a mild alcoholic intoxication. The duration of obnubilation ranges from a few minutes to several months. It is observed in intoxications, brain injuries, voluminous processes in the brain, progressive paralysis, infectious diseases, vascular pathologies.

Somnolence: a deeper extent of torpor, the state of half sleep when during a greater part of the time the patient lies with closed eyes. The phrase speech is absent, but the patients are able to give their answers to simple questions, the answers consisting of one word. More difficult questions are not comprehended. Adynamia is expressed.

Sopor means pathological sleep. The patient lies motionless, his eyes are closed, there is no expression on his face. Any verbal contact with the patient is impossible, orientation is absent, activity of the second and first signal systems is discontinued. Adynamia reaches the extent of the absolute immobilization, but some undifferentiated stereotyped defense motor and, sometimes, vocal responses. The pain, cough, corneal, pupillary, vomiting and swallowing reflexes are preserved. A return from sopor is accompanied by the absolute amnesia.

Coma is the deepest extent of the disengagement of consciousness. It belongs to extreme states. Only vital functions of the organism (cardiac and respiratory activities, vascular tension and thermal regulation) are preserved. Conditioned reflexes die away,

pathological ones develop. As the coma deepens, the cardiac activity, vascular tension and thermal regulation are affected, pathological forms of respiration appear. If no urgent aid is given, the outcome is lethal.

Cloudiness of consciousness: this term embraces disturbances in which there is a total disintegration of the whole psychic activity consisting in a qualitative change of the contents of consciousness. These disturbances are polymorphous by their structure and, besides different variants of disorientation, include psychopathological symptoms, where the leading ones are hallucinations, delusions, false recognitions, emotional and motor excitement, disturbances of memory. In cases of cloudiness of consciousness, the latter reflects a world of morbid feelings rather than the objective reality.

PSYCHOPATOLOGICAL SYNDROMES

The psychopathological syndrome is a more or less stable totality of symptoms pathogenetically connected with one another.

Revealing of the leading syndrome (syndromological diagnosis) is the initial stage of the diagnostic process which is of a great practical significance. There are various classifications of syndromes: by the preferential disruption of some mental function, by the depth of the impairment of the personality, etc.

The classification of psychopathological syndromes with regard for registers of mental disorders, reflecting the depth of the impairment of the personality, is the one which most completely satisfies requirements of assessing the depth of mental disorders and indications for various kinds of therapy.

The psychotic state is characterized by presence of at least one of the following signs: clouding of consciousness, delusions, hallucinations. In this situation the patient cannot critically assess his diseased state and does not understand the morbid character of the disturbances.

Nonpsychotic (borderline) mental disorders are mostly characterized by disorders of emotions and in the effector-volitional sphere. The patients critically assess their diseased state, understanding that they are ill.

Defect-organic disorders manifest themselves through disrupted intellectual functions (of memory and thinking).

Classification of psychopathological syndromes

I. Nonpsychotic, borderline syndromes:

1. Asthenic (asthenoneurotic, asthenodepressive, asthenohypochondriac, asthenoabulic).
2. Apathoabulic.
3. Neurotic and neurosis-like (neurasthenic, the syndrome of obsessive states, dysmorphophobic, depressive-hypochondriacal).
4. Psychopathic and psychopathy-like.

II. Psychotic syndromes:

1. Syndromes of a cloudiness of consciousness
 - a) asthenic confusion
 - b) perplexity
 - c) delirious
 - d) amentia
 - e) oneiroid
 - f) twilight state of consciousness
2. Depressive (psychotic variant)
3. The syndrome of hallucinosis (verbal, tactile, visual)
4. The syndrome of derealization and depersonalization

5. Maniacal
6. Paranoid (including hallucinatory-paranoid, hypochondriac, dysmorphomaniac, Kandinsky-Clérambault syndrome of psychic automatism)
7. Paranoiac
8. Paraphrenic
9. Hebephrenic
10. Catatonic

III. Defect-organic syndromes:

1. Psychoorganic (explosive, apathetic, euphoric variants)
2. Korsakoff's amnesic
3. Mental retardation
4. Dementia (total and lacunar)

The asthenic syndrome (Greek: a - absence, stheno - strength) manifests itself by a marked physical and mental tiredness which appears even after some insignificant exertion. The patients have a difficulty in concentrating, therefore they memorize poorly. They develop a lack of emotional restraint, lability, an increased sensitivity to sounds, light, colours. A rate of thinking is delayed, the patients experience difficulties in solving complex mental tasks.

In **asthenoneurotic states**, the above phenomena of asthenia are accompanied by a hot temper, an increased irritability, tearfulness, capriciousness.

In **asthenodepressive states**, the phenomena of asthenia are accompanied by depression.

In the **asthenohypochondriac syndrome**, the asthenic symptoms are accompanied by an increased attention to one's own physical health; the patients pay much attention to various unpleasant sensations coming from their internal organs. It is not in rare cases that they develop thoughts about presence of some incurable disease.

In the **asthenoabulic syndrome**, the patients, who begin some work, get tired so quickly that actually are not able to fulfill the simplest tasks and actually become inactive.

The asthenic syndrome in its different variants is observed in all somatic exogenous-organic, psychogenic diseases.

The **apathoabulic syndrome** is characterized by a reduced strength of emotions, indifference to what is going on around and to the self in combination with an absence of any motives to activity. Such patients would usually lie or sit, doing nothing. They are slovenly and inert. It is observed in organic lesions of the brain and schizophrenia.

The **neurotic syndrome** is a symptom-complex that includes phenomena of instability in the emotional and volitional spheres with an increased mental and physical exhaustibility, with a critical attitude to one's own state and behaviour. Depending upon

peculiarities of the personality, it may be of the neurasthenic, hysterical and obsessive-phobic character.

The **neurasthenic syndrome** (the syndrome of irritable weakness) is characterized, on the one hand, by an increased excitability, unrestrained affect, an inclination to wild affective responses with volitional instability, and, on the other hand, by an increased exhaustibility, tearfulness, a weak will.

The **hysterical syndrome** is characterized by an increased emotional excitability and lability, theatrical behaviour, an inclination for dreaming and falsity, to wild affective responses, fits of hysteria, functional paralyses and pareses, etc.

The **syndrome of obsession (the obsessive syndrome)** manifests itself by annoying thoughts, phobias, obsessive desires and actions. As a rule, the phenomena of obsession appear suddenly, they do not correspond to the contents of the patient's thoughts at this moment, his attitude to them is critical and he struggles with them. The syndrome of obsession occurs in neuroses, somatic and exogenous-organic diseases of the brain.

The **dysmorphophobic syndrome**: the patients overestimate significance of the deformities they have, actively search for aid of specialists, demand making cosmetic operations on them. Most frequently it develops at puberty by the psychogenic mechanism. For instance, if juveniles are sure that they have some overweight, they strictly limit their food (psychic anorexia).

The **depressive-hypochondriacal syndrome** is characterized by appearance of thoughts in the patient about presence of some serious or even incurable disease, they being accompanied by low spirits. Such patients would persistently search for aid from doctors, demand various examinations, administration of some drug therapy.

Psychopathic and psychopathy-like syndromes are symptom-complexes of emotional and effector-volitional disturbances, which are of a more or less stable character and cause the main type of neuromental responses and behaviour, usually insufficiently adequate to the real situation. They include an increased emotional excitability, inadequacy of voluntary actions and acts, an increased irresistibility to instinctive drives. Social dysadaptation of such patients is conditioned by their personality disharmony.

Depending upon peculiarities in the type of the higher nervous activity and conditions of upbringing, it is possible to observe the asthenic, hysterical, psychasthenic, irritable, paranoiac or schizoid variants of the psychopathic syndrome; they are the basis of various forms of psychopathy and psychopathy-like states of the organic and other origin. They are often accompanied by sexual and other perversions.

The psychopathic syndrome develops by the moment of formation of the personality (by 18-20 years).

The psychopathy-like syndrome develops in the people, who were harmonious before, under the influence of exogenous-organic lesions of the brain.

Cloudiness of consciousness – disturbances in which there is a total disintegration of the whole psychic activity consisting in a qualitative change of the contents of consciousness. These disturbances are polymorphous by their structure and, besides different variants of disorientation, include psychopathological symptoms, where the leading ones are hallucinations, delusions, false recognitions, emotional and motor excitement, disturbances of memory.

The syndrome of asthenic confusion is accompanied by some “twinkling” in the clarity of consciousness, an expressed exhaustibility of psychic processes, an increasing cloudiness of consciousness by the evening. In the beginning of a conversation, as a rule, the patients are still able to answer questions, later their speech becomes inarticulate, “muttering”, a contact with the patient is affected. No delirium and hallucinations are observed. The syndrome of asthenic confusion may develop in infectious diseases, more frequently it is typical for children and juveniles. In case of an unfavourable development of a prior disease, the syndrome of asthenic confusion may turn into delirium or amentia.

The syndrome of perplexity (“affect of bewilderment”) is characterized by a disturbance of self-consciousness, cognition and adaptation to the surroundings. The patients are helpless, their facial expression is bewildered, the look is roving, the movements and answers to questions are uncertain, questioning and inconsistent, interrupted by silence. Sometimes the patients ask to explain what is going on with them and around. The perplexity is indicative of a relatively superficial disturbance of the psychic activity, when awareness of one’s own change is preserved. This perplexity develops in case of a sudden, inexplicable and unusual change in what is going on around or within the patient himself, and may manifest the initial stage of developing delirious, depressive and other syndromes. Often the structure of the syndrome includes symptoms of depersonalization and derealization. It occurs during output from a coma, and in case of paranoid syndrome.

The delirious syndrome is the most frequent form of a cloudiness of consciousness, accompanied by an influx of vivid visual hallucinations and illusions, delusions, and a changeable affect where some fear and alarm prevail. The patients are characterized by motor excitement, their orientation in place and time is disturbed, but in the self is preserved. A delirious cloudiness of consciousness gradually increases and its first signs become clear usually by the evening: the speech, facial expression and motor responses become animated and accelerated, some general excitement and anxiety develop. The patients are garrulous, inconsistent in their statements, their movements acquire an exaggerated expressiveness. The mood is changeable, the sleep is superficial, interrupted and accompanied by vivid, often nightmarish, dreams, alarm

and fears. In the morning, the patients feel weak and jaded. Later, against a background of intensification of the above disturbances, there is appearance of visual illusions changing into hallucinations at the moment of falling asleep, a distinction between the sleep and reality is obliterated. It is followed by a further increase of the symptoms with development of real visual hallucinations. In some cases it is impossible to reveal any concrete plot in the contents of the visual hallucinations and apparitions change one another without any relation between them, while other cases are characterized by appearance of consecutively changing scenes which are connected by their contents. Depending upon the etiological factor, visual hallucinations may have their own peculiarities. Thus, delirium tremens is characterized by presence of animals in morbid feelings; in people who received a brain injury in a tactical situation, subjects of war episodes prevail. In delirium, the patient is an active participant in his morbid feelings, his emotional state and acts correspond to the contents of what he has seen, he is seized with bewilderment, curiosity, fear and horror, at the same time he may run, hide, defend himself. The speech excitement is often limited to short phrases, words, cries. In the period of an extensive delirium, some auditory, tactile and olfactory hallucinations, as well as delusions, may develop. The night period is characterized by either absolute insomnia or superficial interrupted sleep which comes only by the morning. In the first half of the day the symptoms of delirium may be significantly or absolutely reduced with predominance of asthenia, in the second half of the day the psychosis recommences again. It is possible to periodically observe so-called light gaps lasting up to an hour. At this time, the hallucinations disappear absolutely or partially, the correct orientation in the surroundings appears, the patients realize that the previous disturbances resulted from a disease, a critical assessment of his own state by the patient may be observed. Sometimes a morbid state may develop very rapidly, it occurring in cases of poisoning with tetraethyl lead, atropine, an antifreeze substance. An unfavourable course of a prior (somatic, infectious) disease may entail development of grave forms of delirium: occupational and muttering.

Occupational delirium is a delirium with predominance of a monotonous motor excitement in the form of usual actions made in everyday life (having meals, doing premises) or directly related to the patient's occupation (sewing, work with a cash register). The motor excitement takes place, as a rule, in a limited space (a bed). Usually, there are no light gaps, a verbal contact is more frequently impossible.

Muttering delirium (delirium mussitans), quiet delirium: a delirium with an uncoordinated motor excitement which is deprived of any integral actions and takes place within the limits of a bed. The patients would shake off something, feel with their fingers, "gather". It is impossible to come into any contact with such patients, an absolute estrangement from the surroundings is observed, the speech excitement is in the form of some low inarticulate muttering. Usually muttering delirium is followed by

occupational one; moreover, these two states may be aggravated by torpor, that is a bad prognosticating sign. Severe forms of delirium may be accompanied by neurological disturbances: tremor, ataxia, nystagmus, hyperreflexia, rigidity of the occipital muscles, etc., rather than by autonomic ones only. As the state deteriorates, dehydration of the organism increases, blood pressure reduces, therefore a collapse may develop, there is a marked hyperthermia of the central origin. A return from delirium is usually made through a severe asthenia, real events are forgotten, only recollections of morbid feelings are preserved. Severe deliria end with formation of the psychoorganic syndrome. A transfer of delirium into amentia is possible.

Delirium is observed in infectious and acute somatic diseases, intoxications (alcoholic, caused by narcomania and toxicomania), vascular diseases of the brain, brain injuries.

Delirium acutum (acute psychotic azotemic encephalopathy): this is a combination of a deep cloudiness of consciousness of the amentia-oneiroid type accompanied by a continuous motor excitement with autonomic, neurological and metabolic disturbances. Delirium acutum is characterized by a malignant development of the symptoms of the disease with a frequent lethal outcome.

The prodromal period usually lasts several hours or days and is accompanied by general somatic complaints: a malaise, a headache, sleep disturbances. At the period of a complete development of the disease, there is prevalence of a violent uncoordinated motor excitement in the clinical picture, usually within the limits of a bed. The speech is incoherent, it consists of separate words and cries. Addition of hyperkineses, clonic and tonic convulsions, epileptiform seizures indicates an aggravation of the state.

A cloudiness of consciousness is accompanied by hallucinations, delirium, alarm or fear. No contact with the patient is possible. The marked autonomic disturbances are manifested by tachycardia, a sharp drop of pressure down to a collapse, profuse perspiration, hyperthermia up to 40-41°C, a sharp development of dehydration, a progressive loss of body weight, an increase of azotemia and oliguria. The patient's appearance is peculiar: pointed features, sunken eyes, dry and parched lips, a dry wrinkled tongue, his skin integuments are pale, sometimes with a sallow or cyanotic tint, there is an appearance of multiple bruises. The death comes in the state of a hyperthermal coma.

Delirium acutum is observed in puerperal psychoses, septic states, progressive paralysis, senile dementia and schizophrenia.

Amentia is a form of a cloudiness of consciousness with prevalence of an incoherence of speech and motility, and perplexity. The patients' speech consists of some words, syllables and inarticulate sounds pronounced in a low, loud or singing voice. The patients' mood is changeable: now it is depressed-anxious, now indifferent, now slightly high with some features of delight. A motor excitement in amentia is

usually within the limits of a bed. It is confined to some separate movements which do not form a finished motor act: the patients fidget, make rotatory movements, bend, start, throw aside their extremities, sprawl in bed. Sometimes a motor excitement may be followed by stupor. Any verbal intercourse with the patients is impossible. Their thinking is incoherent, the facial expression is bewildered. The patients are perplexed and helpless. At night, amentia may change into delirium; at daytime, in aggravation of amentia, torpor develops. Amentia lasts several weeks. The period of a cloudiness of consciousness owing to amentia is absolutely forgotten. A return from amentia takes place through a severe and long asthenia. Formation of the psychoorganic syndrome with an intellectual-mnemonic reduction is possible. Amentia is observed in severe somatic, infectious and noninfectious diseases, more seldom in intoxications, at an acute period of epidemic encephalitis.

The oneiroid syndrome is a cloudiness of consciousness with an influx of some spontaneously developing fantastic representations; they contain modified fragments of what has been seen, heard, experienced and read, but they whimsically get entangled with distortedly perceived details of the surroundings; the appearing pictures (visions) are notable for their resemblance of scenes and dreams.

Development of an oneiroid is gradual and goes through a series of successive stages:

The initial period determined by affective disorders. Depressive states are accompanied by listlessness, irritability, unmotivated alarm, loss of strength. Maniacal states carry an imprint of enthusiasm, touchingness, feelings of emotion and enlightenment. The above disorders are accompanied by disturbances of sleep and appetite, headaches, discomfort in the heart region. This stage may last from several weeks to several months.

The stage of delusional mood – the surroundings seem to the patient as something incomprehensible, changed and full of an ominous meaning. Either some uncontrolled fear or foreboding of an inevitable evil, sometimes madness or death, appears. It seems to the patient that he is persecuted, that he is seriously ill, he develops perplexity, a delirious orientation in the surroundings, inadequate acts. At the same time he has a sensation that something, some action is taking place around him, like in the cinema or theatre, and the patient is a participant at one moment and a spectator at another; a transformation of some people into other ones is taking place. Periodically, a psychomotor excitement or inhibition may be observed. These symptoms tend to increase and may last up to several weeks.

The stage of an oriented oneiroid – real events occurring around the patient acquire some fantastic contents. The perplexity may be accompanied by a psychomotor excitement or substupor, when the patients feel fear and may be in the state of depression.

The stage of an extensive oneiroid – the patient’s consciousness is characterized by predominance of fantastic representations connected with the inner world of the patient. They are based on visual hallucinations, and before the patient’s “inner eye” pass scenes of immense situations, where he is the main character of the events which take place. Gradually, motor disorders in the form of stupor develop, the patients become speechless, no verbal contact with them is possible.

Reduction of the symptoms of an oneiroid is gradual, in the reverse order of their appearance. Memory to morbid feelings is partially preserved, but real events are forgotten. There are two forms of oneiroid: endogenous (in schizophrenia) and exogenous-organic (invascular, somatogenic psychoses, delirium tremens, senile psychoses, at a remote period of brain injuries).

Twilight state of consciousness – a sudden loss of the clarity of consciousness with an absolute estrangement from the surroundings lasting from several minutes to several days. By its clinical manifestations, the twilight state of consciousness is subdivided into a simple and psychotic forms without any distinct borders between them.

The simple form develops suddenly, the patient is disengaged from the reality. It is impossible to enter any verbal contact with him, the speech is either absolutely absent or may consist of some words or short phrases which are often repeated. The movements are delayed and impoverished up to the development of a short-term stupor changing into episodes of an impulsive excitement. Sometimes an outwardly purposeful activity may be preserved. The patients may cover long distances, using transport, cross streets where it should be done, etc. In this case, the term of “ambulatory automatism” is used. The ambulatory automatism, which appears in sleep, is called somnambulism, or lunacy. The simple form of the twilight state of consciousness may last several minutes or hours and is accompanied by absolute amnesia.

The psychotic form of the twilight state of consciousness is accompanied by hallucinations, delirium and a change of mood. In morbid feelings, visual hallucinations with frightening contents prevail: a car, train or airplane rushing at the patient, collapsing buildings, approaching water, pursuit, etc. Auditory hallucinations are often deafening: explosions, tramp, thunder; olfactory ones have unpleasant contents too: a smell of burning, urine. Common delusions, as a rule, are persecution and physical annihilation, religious-mystic delusions also occur. These feelings are accompanied by wild emotional disturbances in the form of fear, frenzied anger or fury. A motor excitement is most often in the form of senseless destructive actions directed at the surrounding people. The patients’ words and actions reflect morbid feelings existing at this moment. After restoration of consciousness the whole period of morbid feelings is absolutely forgotten. The twilight state of consciousness is most frequently observed in epilepsy and traumatic lesions of the brain.

Besides, in the forensic medical practice, so-called **exclusive states** are found: a group of acute short-term disturbances in the psychic activity with various etiology and similar clinical signs. These disturbances begin suddenly in connection with an external situation, they are short-term, accompanied by a disturbance of consciousness and an absolute or partial amnesia. Exclusive states develop in the persons suffering from mental diseases and, as a rule, are a single episode in their life.

The exclusive states include: pathological affect, a pathological prosomniac state, a “short-circuit” response and pathological intoxication.

The purposefulness and clinical necessity of isolating exclusive states into a separate group are confirmed by the practice of forensic medical examinations. The experts are often asked a question about the mental state of the subject at the moment of accomplishing some socially dangerous actions. Therefore the substantiation of the very concept of “exclusive state” and the establishment of diagnostic criteria were made in compliance with legal norms: the problems of responsibility and irresponsibility.

Clinical manifestations

The cardinal sign of all exclusive states consists in their psychotic nature. A leading place in their clinical picture is occupied by a disturbance of consciousness with disorientation, an absolute isolation from the reality and a morbidly distorted perception of the surroundings. A profound disorientation in the surroundings is accompanied by preservation of complex interrelated automatized actions. The behaviour in the twilight state of consciousness is conditioned by an imagery delirium, hallucinations, a strained affect of fear, anger, melancholy and fury, they determining socially dangerous actions. A subsequent amnesia both spreads to real events and often involves subjective feelings.

Exclusive states may be observed in actually healthy persons. But case histories of the majority of people who had an exclusive state reveal smooth residual organic changes whose etiology contains injuries, infections or intoxications. In some cases one cannot exclude a part played by some constitutional predisposition, epileptic in particular. An especially great part is played by asthenia, an exhausting effect of some preceding stress and overexcitement, as well as insomnia.

Thus, a preliminary preparation of the ground is made by a number of pathogenic factors. They determine a functional state of the nervous system by the moment of action of the stimulus which causes an acute psychotic disturbance. A lot of accidental relieving factors in uncommon and rare combinations take part in the appearance of such a temporary predisposition, it may be an explanation for an extraordinary rarity of exclusive states and a little probability of their repeated development in the same person.

Pathological affect is a short-term psychotic state, whose sudden appearance is caused by factors which traumatize the psyche. It is possible to isolate three phases in the clinical picture of the pathological affect.

* First, preparatory. In connection with the factors which traumatize the psyche (offence, insult), an emotional tension is growing, a perception of the surroundings is changed, a capacity for observing what is going on, for assessing the situation and realizing one's own state is impaired. The consciousness is limited by a narrow circle of representations directly connected with the traumatizing feeling, all the rest is not perceived.

* Second, the phase of explosion. A tense affect of anger or frenzied fury instantaneously reaches its culmination, is accompanied by a deep cloudiness of consciousness with a sharp elevation of the threshold of perception and an absolute disorientation. At the height of a disturbance of consciousness, some illusory representations and functional hallucinations are possible. An emotional discharge is manifested by a wild motor excitement with automatic actions, a senseless aggression and destructive tendencies. They all are accompanied by a marked mimic and autonomic response: the face gets sharply reddened or becomes unusually pale. The features are distorted, an excessively expressive facial expression reflects mixing of various emotions, anger and despair, fury and bewilderment. The state achieves its maximum tension.

* Third, the concluding phase. It is accompanied by a sudden exhaustion of the physical and mental strength. Deep, irresistible sleep comes. In some cases, instead of the sleep, there prostration (general weakness, listlessness, an absolute apathy and indifference to the surroundings and what has been made).

Clear clinical criteria for diagnosing the pathological affect are of a paramount significance because of a necessity to differentiate it from the physiological affect, as different crimes, particularly against the personality, are often committed in a state of some mental excitement.

The main clinical distinction of the pathological affect is a disturbance of consciousness with a disengagement from the reality, its distorted perception, a limitation of consciousness to a narrow circle of representations, directly connected with an actual stimulus. The psychotic nature of the pathological affect is also manifested in a regular change of the phases which are traced despite an extraordinary acuteness of this state.

As an example of the pathological affect, an extract from a case history is cited below.

An examined 29-year-old male C. is accused of inflicting grave bodily injuries to his father, they causing his death.

C. finished 10 forms of secondary school, then studied by correspondence in institute and at the same time worked as economic engineer. By disposition, he is impressionable, sensitive and delicate. He is married, his relations with his wife are good, despite a difficult situation in his family. The examinee's father abused alcohol, in the state of alcoholic intoxication he unmercifully beat his wife. In the recent period of time C. was graduating from the institute and worked much, he got very tired because of sleepless nights, as every day his father came home drunk and created scandals.

On the day of the accident, his father returned late, in a state of intoxication, made a row with his mother, demanded that she ask him to apologize her for something, used obscene words, insulted his mother in every possible way, hit her head with his fists. C., who was lying in an adjacent room, tensely listened; the scandal was flaring up still more and more. The father, having gripped a shoemaker's hammer from a table, began to threaten the mother with it. She made a loud cry, after what the examinee's little son woke up and began to cry. His son's cry "acted like a siren" on him and aroused some unbridled rage. Having jumped out of bed, C. rushed to his parents' room, ran up to his father and attacked him with the hammer. Everything went dark before his eyes, he saw only a distorted face of his son; now it was approaching and enlarging, now it was vanishing somewhere; he felt that he "was being wrapped in mist". He does not remember what happened later. He regained consciousness at his parents' room, feeling that he was sharply weak, jaded and sleepy at that time. He was shocked when he learnt from his wife what had happened. Overcoming his fatigue, he tried to give aid to his father, but he failed to wait for doctors and fell asleep.

From the materials of the case it is known that when the examinee's mother cried for help and at the same time his child began to cry, C. jumped out of bed and swiftly rushed to his father who raised the hammer against him. When the wife of C. ran out of another room she saw the hammer in her husband's hands. C. stood bending over his father who lay in blood on the floor. He was very pale and shaking all over. His did not respond to his wife's questions, "his eyes were some glassy, immobile", "he looked and saw nothing", going on mechanically hitting his father's head with the hammer. When his wife snatched the hammer out of his hands and cried loudly, calling him by his name, he apparently came to himself and looked at his bloody father with surprise. At that time he was perplexed, tried to go somewhere, but suddenly "stood stock-still, as if dead". Then he approached to his father, bowed over him, then rested against a chair somehow with his side and instantaneously fell asleep. The surrounding people laid him on a bed, but he did not wake up and went on sleeping even at the moment when his father was being carried near him on a stretcher. His father was admitted to hospital in an unconscious state with multiple fractures of his cranial bones and an injury of the matter of his brain.

A short-term psychotic state in this case developed as a response to an affective irritation against a background of asthenia caused by action of some temporarily relieving factors (overstrain, insomnia) with phenomena of autonomovascular dystonia, which were constantly peculiar to the examinee.

Pathological prosomniac states; before they were described as “sleep intoxication”. Most authors emphasized a rate of aggressive actions made in such states.

A pathological prosomniac state should be understood as a state of an incomplete awakening after the deep sleep with an uneven transition of some systems of the brain from sleep to wakening. After “awakening” of simpler motor functions the higher mental ones (consciousness, first of all) remain in the state of sleep inhibition. Such an uneven, delayed transition from sleep to wakening is accompanied by cloudiness of consciousness and a deep disorientation. The continuing dreams may be vivid, imagery, frightening. Some distortedly perceived real events are interspersed into a frightening dream and combined with illusory or even short-term hallucinatory-delirious feelings.

The motor functions, released from the sleep inhibition, make the subject capable for aggressive-defensive actions. They are manifested in the form of either automatic acts or integral motor acts reflecting pathological feelings. It is not rarely that persons in prosomniac states commit murders and inflict grave bodily injuries. The period of excitement is usually followed by a final awakening with a complete regain of consciousness and a subsequent adequate response of perplexity and surprise at what has happened. After the final awakening, no recollections of the morbid state are usually left. In some cases, they are partially preserved, mainly concerning dreamy images. Sometimes prosomniac states last only a few moments, but in some cases take more time.

Usually, prosomniac states appear in persons with feebly marked organic changes in their central nervous system, more frequently of a traumatic origin, as well as in the people whose sleep is deep and sound. Side by side with this, significantly important in the genesis of pathological prosomniac states is a complex of temporary hazards which produced their effect prior to falling asleep. The first place among them belongs to the use of alcohol. A pathogenic role of a preceding emotional strain, overstrain, forced sleeplessness and somatopsychic asthenization was also noticed.

An examined 35-year-old male P. is accused of killing his wife.

At the age of 20 he suffered a contusion with a short-term loss of consciousness. Upon his demobilization from armed forces he worked as wood-cutter. By disposition, he was always joyful, cheerful and sociable. At the age of 22 he was operated on for gastric ulcer; after the operation he became irritable and reserved. He began working as

night guard at bakery. He bore alcoholic drinks bad, grew inebriated after small quantities of alcohol and in the state of intoxication rapidly fell asleep. He always slept very soundly and felt an increased need of sleep. If he did not sleep enough, he felt jaded and irresistibly sleepy.

On the day of the accident, he had supper with his wife and drank about 300 g of vodka. That evening he was upset as the wife refused to go to his parents with him. At about 10 p.m. he went for his night duty. During the duty he grew cold, "was chilled", came home several times, but could not grow warm. He felt tired and jaded. Having not waited for his relief, he went home before the end of his duty, immediately went to bed and fell asleep at once. He remembers that he had a terrible dream. He dreamt that the bakery was ruined, its windows were broken. In the opening of the broken window he saw some figure in white who was approaching to him having stretched his arm forward, he heard a baby's cry, cries for help. Saving himself, he tried to run, but all the time that person was nearby; out of fear he hit him with an axe. He does not remember anything about subsequent events. He woke up "because of some push", having heard a knock at the door, from force of habit he lit, opened the entrance door. Having seen people near the house, "he felt something wrong"; only after that he saw a corpse of his wife in the corner of the room and some blood on the floor, he got very frightened and could not understand what had happened.

From the materials of the case it is known that P. returned from his duty at 4 a.m. and went to bed where a baby was sleeping. In the same room were sleeping the examinee's wife, his 5-year-old daughter and their female relative. At about 6 a.m. P. suddenly jumped out of bed, began to dash around the room, muttering something. As the relative testifies, at that time his appearance was perplexed, he was pale, trembling all over and repeating again and again, "The windows are being broken, the bakery is being ruined". The relative woke the wife, who immediately rose to her feet, while the relative grabbed the baby and ran out of the house to cry for help.

Further events were witnessed only by the 5-year-old daughter of P., who testified that when her mother ran up to her father, he silently gripped an axe which was standing near the oven and "began to hack the mother". The girl cried for help, but nobody was nearby. She covered her head with a pillow and heard nothing any more. The neighbours, who came 15 minutes later, saw a corpse of the wife of P. on the floor, while P. was lying across her bed on his back, with his face up and semibent legs. His wife's arm was cut off and squeezed between his knees. He did not give any answers to calls made by the surrounding people. The neighbours carried out the girl and closed the door.

The witnesses who were standing near the window inform that 15-20 minutes later the neighbour knocked at the door again. P. rose to his feet, lit and opened the door, looking around in perplexity. Having seen his wife's corpse on the floor, he dashed to it and was crying.

At the moment of making the kill P. developed a pathological drowsiness with a morbidly distorted perception of the surroundings after a spontaneous but incomplete awakening from deep sleep. Vivid frightening dreams went on after the time when motor functions were released from the sleep inhibition. Separate fragmentary statements were indicative of a relation between pathological feelings and dreams, and disclosed their contents. The real events (a figure of the wife who had awoken, the baby's cry, cries for help) were interspersed into the situation created by the dream. The dreams, which went on, were accompanied by alarm and fear. The examinee's actions were connected with pathological feelings, by their character they were automatisms with a senseless aggression, as it is demonstrated by numerous stabs made at the same place. The excitement changed into deep sleep followed by an absolute amnesia of the real events with preservation of recollections concerning the dream.

The “short-circuit” response. Such a pathological response develops owing to a protracted situation, which traumatizes the psyche, and as a result of a discharge of some long and intensive affective strain accompanied by anxious apprehensions and expectation of troubles, on which almost all the representations of the subject are concentrated. A socially dangerous action, which was not intended before, is caused by an instantaneously formed and often absolutely accidental situation. The clinical picture is determined by either a disturbance of consciousness or sharply marked affective disturbances (frenzied rage, despair, etc.) which do not correspond to their cause and are accompanied by impulsive, automatic actions, including those ones which are dangerous for the surrounding people. Like after the pathological affect, the “short-circuit” response is followed by sleep or a sharp psychophysical exhaustion.

Pathological intoxication is a twilight cloudiness of consciousness with various structure; it belongs to a group of acute short-term mental disorders.

Pathological intoxication is characterized by a sudden development of a sharp change of consciousness, like the twilight one; it qualitatively differs from “clouded” consciousness or torpor in a common alcoholic intoxication. A person with pathological intoxication perceives the surrounding reality in a morbid way, the external situation becomes threatening to him. It is accompanied by alarm, fear, sometimes reaching uncontrolled horror. In the state of pathological intoxication it is possible to observe animation of some dangerous situations from the past, a pathological reproduction of a number of events from some books read before and their transfer to the reality imagined. In such cases, an ability to make rather complex purposeful actions, use transport, find a correct road, etc., is usually preserved. But most frequently a subject, who is in the state of a changed consciousness, is pathologically disorientated, unable to

have any speech intercourse with the surrounding people, always acts alone, any combined actions in such cases are impossible. The speech production in pathological intoxication is extremely meagre, and even if it is available it always reflects aspects of morbid disorders. A person in this state usually does not respond to any real stimuli, does not answer any questions, his attention cannot be attracted.

The acts made in pathological intoxication do not result from real motives and real circumstances, but at the same time they rarely are chaotic disorderly actions. Such acts are always based on morbid impulses, motives, representations. Forced actions are of a particular character, defensive for the subject; they are usually directed at elimination of an imagined danger.

In pathological intoxication, as a rule, the nervous-mental mechanisms, regulating complex automatized skills, equilibria and actions, associated with motor processes, are little involved. Often it contributes to making exceptionally adroit, complex and quick actions directed at realization of morbid motives.

Pathological intoxication ends as suddenly as it begins. Sometimes it turns into sleep, followed by an absolute amnesia or a dim recollection of what has been felt.

An examined 33-year-old male L. is accused of killing female B.

In the evening he drank 100 g of home-brew and went for his duty. He does not remember what he did later, he “came to himself” tied together in a car on the way to a police station.

From the materials of his criminal case it is known that having come to his job, L. suddenly gripped a gun and, shooting, began to run on the territory in charge. His expression was “furious, wild”, he was running “evenly, without staggering”. L. repeatedly shot inside the buildings he guarded and did not pay any attention to cries made by the surrounding people. Later L. ran into one of the buildings and opened an aimless shooting, during which he killed B. At that time L. was hiding and shouting “Where ... they...o...o...o...”. After a blow against his head L. fell down to the ground, did not resist, and muttered something. Having regained consciousness, he did not remember anything about what had happened.

Besides the above forms of the twilight cloudiness of consciousness, there may be “twilight” which can be defined as hysterical. They develop after psychic traumas, and the patients’ behaviour reflects the contents of the psychic trauma. The most frequent forms of the hysterical twilight cloudiness of consciousness are puerilism, pseudodementia, Ganser’s syndrome.

Puerilism appears most often in a situation of a threat for an act made. The patient’s behaviour clearly reveals some “age-related regression of the personality” with features of infantile behaviour: addressing official persons as “uncles” and “aunts” with

an attempt to climbing up to their lap, the babbling speech, crawling on all fours, etc. At the same time, some acquired habits of an adult are observed (smoking).

Pseudodementia: a twilight state of consciousness with incorrect forms of behaviour and a vivid demonstration of dementia. The patients are not able to follow the simplest instructions, at the same time fulfilling more complex tasks.

Ganser's syndrome: a twilight state of consciousness when the patients answer beside the point of the question asked (“miss-talking”, “miss-speech”), but the patient's answer always exists in the context of a conversation with him.

The above forms of psychosis may last several days and be accompanied by a total amnesia.

The maniacal syndrome is characterized by the maniacal triad: euphoria (inadequately high spirits), acceleration of associative processes, and a motor excitement with a yearning for activity.

Typical for the maniacal syndrome is distraction; for this reason the patients are not able to complete what they began to do, consistently offer their anamnestic information. Despite the fact that the patient talks with his physician willingly and without a stop, this conversation is fruitless, as the patient distracts to various external events or associations which appear in him. Usually these associations are of a superficial character.

Patients in the maniacal state usually do not produce any somatic complaints, they feel a fresh surge of physical strength rather than “high spirits” only. In this state they are inclined to overestimate their abilities and opportunities. The sexual drive may be intensified, the patients would easily come into contacts, strike up sexual acquaintances, marry, give empty promises.

Mild variants of maniacal states are customarily termed as hypomaniae.

Different variants of the maniacal syndrome are observed in the bipolar affective disorder, as well as in schizophrenia, protracted symptomatic psychoses, after brain injuries, in progressive paralysis and acute intoxications.

The depressive syndrome is characterized by a depressive triad: a depressed, sad and melancholic mood, a delayed thinking and a motor inhibition. Expressiveness of the above disorders is various. The range of hypothymic disturbances is wide: from mild depression, sadness and disappointment to a deep melancholia when the patients feel some heaviness, a pain in the chest, lack of any prospect, uselessness of their existence. Everything is perceived in dark colours: the present, the future, the past. In some cases

the melancholia is perceived as a painful physical sensation in the region of the heart, some “precardiac melancholia” in the chest, rather than as a mental pain only.

Inhibition in the association process is demonstrated by an impoverishment of thinking; there are scant thoughts, they flow slowly and are confined to unpleasant events (diseases, ideas of self-condemnation). No pleasant events are able to change this direction of the thoughts. Answers to questions in such patients consist of one word, often there are long pauses between the question and the answer.

Motor inhibition manifests itself in delayed movements and speech, the speech is low and slow, the facial expression is sorrowful, the movements are delayed, monotonous, the patients may remain in the same posture for long periods. In a number of cases, motor inhibition achieves absolute immobility (depressive stupor).

The psychotic variant of the depressive syndrome is characterized by delusions of self-condemnation, self-humiliation, sinfulness and culpability which may make the patient think about suicide.

The depressive syndrome is usually accompanied by some expressed autonomosomatic disturbances: tachycardia, unpleasant sensations in the heart region, fluctuations in the blood pressure with a tendency to hypertension, disturbances in the gastrointestinal tract, loss of appetite and body weight, persistent constipations, endocrine disorders.

In recent years, physicians often reveal so-called “latent”, “masked” depressions in their patients, where expression of the emotional component of the depressive syndrome is insignificant and somatoautonomic disturbances prevail.

“Masks of depression” may have various clinical forms.

1. *“Masks” in the form of psychopathological disorders:* anxious-phobic (a generalized anxious disorder, anxious doubts, panic attacks, agoraphobia), obsessive-compulsive (obsession), hypochondriac, neurasthenic.
2. *“Masks” in the form of a disorder of the biological rhythm:* insomnia, hypersomnia.
3. *“Masks” in the form of autonomic, somatic and endocrine disorders:* the syndrome of autonomovascular dystonia, vertigo, functional disturbances of the internal organs (the syndrome of hyperventilation, cardioneurosis, the irritable colon syndrome, etc.), neurodermitis, skin itching, anorexia, bulimia, impotency, disorders of the menstrual cycle.
4. *“Masks” in the form of algiae:* cephalgia, cardialgia, abdominalgia, fibromyalgia, neuralgia (of the trigeminal and facial nerves, intercostal neuralgia, lumbosacral radiculitis), spondylalgiae, pseudorheumatic arthralgiae.
5. *“Masks” in the form of pathocharacterological disorders:* disturbances of drive (dipsomania, narcomania, toxicomania), asocial behaviour (impulsiveness, disputability, fits of aggression), hysterical responses.

When diagnosing “latent depressions” it is necessary to take into consideration such their symptoms as:

- 1.The highest manifestation of the subjectively unpleasant feelings is in the morning.
- 2.Polymorphism, indefiniteness, abundance of persistent somatoautonomic complaints which exceed the limits of a certain disease.
- 3.Disruption of the vital functions (sleep, appetite, menses, potency, loss of weight).
- 4.Periodicity of the disorders, their spontaneous appearance and disappearance.
- 5.Their seasonal character (most frequently in spring and autumn).
- 6.Application of different methods of investigation does not reveal any concrete somatic disease.
- 7.Absence of the effect of somatic therapy.
- 8.The patient is treated by doctors of different specialities for a long period of time, persistently and without any result, but despite failures in the treatment he persistently goes on visiting doctors.

Different variations of masked depression are observed at the depressive phase of the bipolar-affective psychosis, presenile and reactive depressions, schizophrenia, somatogenic psychoses (in combination with asthenia, alarm, melancholy).

A generalized anxious disorder is manifested by complaints about some internal stress, alarm, foreboding of some imminent trouble, but they are not connected with any definite circumstances. It is characterized by anxiety and restlessness, difficulties in concentration, muscular tension, tremor, various autonomic disturbances.

A panic disorder: an episodic paroxysmal alarm which appears suddenly, mostly at night, with fits of a painful alarm and the fear of death, a sensation of a lack of air, tachycardia, nausea, sensations of numbness in the extremities, fever or cold, cold sweating for up to one hour or even longer.

Phobic disorders: periodically appearing fits of fear which have concrete sensual contents: a sudden cardiac arrest, loss of consciousness, accident, etc., where a psychological defence against a conflict of the personality unrealized by the patient is manifested. The fits may be timed to a certain situation: being alone, in a close space, in a crowd of people, when crossing a street, going in the public transport, etc., but they rarely take place in medical establishments, in presence of a physician. They are accompanied by autonomic signs.

Syndromes of hallucinosis (visual, auditory, tactile, etc.): an imaginary perception of images without any real stimulation of the corresponding analyzer, without a delusive interpretation of hallucinations, with or without a critical attitude.

The syndrome of an improper body scheme: psychosensory intero- and proprioceptive disorders in the form of a distorted perception of the corporal “ego”; it

manifests itself in the sensation of elongation, shortening, bending of the extremities, head, internal organs, etc. It is in the structure of the syndrome of depersonalization.

Depersonalization: sensations of changes in the mental and/or physical, corporal “ego”. The patient feels all his body or its part estranged, there is estrangement of mental processes (thinking, behaviour).

Derealization: a sensation of a change in the surroundings (remoteness, illusiveness, dimness) is perceived as an unusual state, accompanied by unpleasant feelings, often in combination with phenomena of depersonalization. It is observed in depression, schizophrenia. Here the orientation in the surroundings is not disturbed.

The paranoid syndrome is characterized by presence of unsystematized delusions with various contents in combination with hallucinations and pseudohallucinations. An imagery delirium, most frequently the delusion of persecution, appears acutely and is notable for a variety of its plot, vividness and a large scope. The patients are anxious and uneasy, they feel fear, sometimes they are confused. More frequently, their behaviour is passive-defensive. It is observed in exogenous, psychogenic psychoses, schizophrenia.

Kandinsky-Clérambault syndrome is a variety of the paranoid syndrome and characterized by phenomena of psychic automatism manifested in such forms as ideational (somebody guides the thoughts), motor (the patient’s movements are directed by a strange force) and emotional (“they make the mood”, “they excite joy, sorrow, fear, delight”). Pseudohallucinations (most frequently auditory), delusions of influence, mentism, symptoms of openness of thoughts (feelings that the patient’s thoughts are understood by the surrounding people) and putting of thoughts (a sensation that the patient’s thoughts are somebody else’s ones transmitted to him) are observed here. It is not in rare cases that the patients have a sensation that in their heads their own or somebody else’s thoughts are heard or there is their forced interruption. Sometimes delusions of influence spread to the patient’s relatives or acquaintances rather than to the patient only, in such cases the patients are sure that not only themselves but other people also are under somebody’s influence. It is most typical for schizophrenia.

The paranoiac syndrome is characterized by presence of a systematized delirium with absence of disturbances in perception and psychic automatisms. The delusions are based on real facts, but the patients’ ability to explain logical relations between phenomena of the reality is impaired, the selection of facts is one-sided, according to the plot of the delusion. It is not in rare cases that during a long period the patients try to prove their case, lodge complaints, bring actions, become “persecutors of their persecutors”, that may be socially dangerous to some extent. It is observed in schizophrenia, presenile and reactive psychoses, alcoholism.

The paraphrenic syndrome is a combination of a systematized or unsystematized delirium with psychic automatisms, verbal hallucinations, confabulatory

sufferings with fantastic contents, a tendency to high spirits. Most of all it is typical for the late stages of schizophrenia.

Cotard's syndrome is characterized by a combination of hypochondriac delirium with delusions of grandeur against a background of a melancholia mood. The patients develop delusions of damage, death, destruction of the world, self-condemnation for perpetration of grave crimes; typical are statements that their "intestines have rotten", they "have no heart", the patients may believe that they died long ago and now are being decomposed. Most frequently, Cotard's syndrome is observed in involuntal depression.

The dysmorphomaniac syndrome is characterized by a triad of signs: delusions of deformity and reference, depression. The patients actively strive for correcting their deformities. When they are refused to make an operation, sometimes they try to change the form of misshapen parts of their body themselves. It is observed in schizophrenia.

The hebephrenic syndrome: a combination of the hebephrenic excitement with foolishness and non-continuous thinking. Patients euphoric, make grimace, mimic the others. Their behavior is fanciful, unproductive, not purposeful. It is observed mostly in schizophrenia.

The catatonic syndrome manifests itself in the form of the impulsive, absurd, senseless excitement (hyperkineses, movement and speech stereotypies, ambivalence) with unmotivated aggression or stupor (an absolute or partial immobilization, a passive or active negativism, mutism, the patients keep a given posture (wax flexibility, catalepsy), keep their head over a pillow long ("an air pillow") or a periodic change of these states. It is observed in schizophrenia, infectious and other psychoses.

The psychoorganic syndrome is characterized by mild disturbances of intellect. The patients' attention and fixation memory diminish, they recall dates of their life and commonly known historical events with difficulty. Their rate of thinking is delayed. The patients experience difficulties in acquiring new knowledge and skills. The level of their judgements and criticism decreases.

Either levelling of the personality or sharpening of streaks of the disposition takes place. Depending upon the fact what emotional responses prevail, the following variants are distinguished: *explosive* (explosiveness, rudeness, aggressiveness), *euphoric* (inadequate joviality, carelessness), *apathetic* (indifference). Some partial reversibility is possible, more frequently there is a gradual aggravation and development of the syndrome of dementia. This syndrome is typical for exogenous-organic lesions of the brain.

Korsakoff's amnestic syndrome includes disturbances of memory for the current events (fixation amnesia), retro- and anterograde amnesia, pseudoreminiscences, confabulations, amnestic disorientation.

Korsakoff's syndrome is observed in an organic cerebral lesion caused by infectious diseases of the brain, intoxication (including alcoholic one), brain injury, vascular cerebral pathology, etc.

Peculiarities in the patient's memory can be assessed with help of the clinical-psychopathological method: in the process of a conversation the physician checks his memory for recent and remote events asking special questions. It is necessary to check the memory for commonly known historic events. In order to assess short memory, the physician may suggest that the patient should remember and then repeat a phrase or a short story.

If the patient has paramnesiae, in a conversation with him the physician reveals contradictory answers, uncoordinated with one another. In order to facilitate detection of paramnesiae, it is possible to ask some leading questions which contain an element of suggestion. Thus, asking the patient how long ago we saw him last time we thereby cause in him a false idea that we already saw each other once. A positive answer demonstrates presence of false recollections in the patient.

When assessing the state of memory, it is necessary to take into consideration the patient's general state; e.g., in depression, patients may complain of defective memory and demonstrate its reduction caused by narrowing of the sphere of interests and reduced concentration of attention. In this case it is necessary to carry on an additional experimental-psychological study of the memory.

Presence of confabulations and pseudoreminiscences always indicates to a significant impairment of the memory. If the patients are inclined to false recollections, it is possible to receive answers which even contradict to one another rather than only do not conform to one another. It may happen that in his answers to the questions containing an element of suggestion in itself, the patient does not give a positive reply, but at the same time he does not decline the question, does not point out its groundlessness and tries to find some corresponding recollection. It shows that the patient is not sure in his recollections, he has defective memory. In an old age, false recollections are of the character of recollections whose development is not spontaneous but results from some prompted questions or a called direction of thoughts. For instance, we ask about some letter, and it reminds of a letter received, though the patient did not receive any letters.

The technique of investigating disturbances of memory in the hospital for psychoses presupposes such a form of its performance that it should not resemble an examination. Wherever it is possible, the physician should emphasize the medical character of the study. Usually, after some introductory phrases, the patient may be asked about the state of his memory, and after his answer the physician may pass to the investigation, making it delicately and carefully in order not to grieve the patient. For instance, it is possible to ask if he knows the first and second names of his physician, and after the answer that he

does not know tell him these names and ask to remember them; then the patient may be asked one or two other questions, e.g., about the name of his wife and the number of his children, after receiving his answers it is possible to ask again if the patient remembers his physician's first and second names. If the patient does not remember them, he may be asked if he has been informed today about the first and second names of his physician. Naturally, in cases of disturbances of memory it is necessary to repeat studies of this type from time to time.

Some patients refuse to undergo investigations of their memory, as they are afraid to reveal its disturbance. In such cases the physician asks questions concerning recent feelings, for example, if the patient remembers what has recently happened to him, what he has eaten for breakfast today, whether he was visited by his relatives, when he saw his physician last time. And if the patient is not able to recall what his physician talked to him about or who visited him, whether he was given an injection, how much time he has been staying at the hospital, or at different times gives different answers to the same questions, a conclusion about some pathology of his memory can be made.

In order to investigate the state of memory, experimental-psychological techniques are used: from the simplest methods (tests for memorization of words, repetition of increasing lines of figures in the direct and reverse order after an interlocutor) to rather complex techniques requiring some experience in their use (Wechsler's memory scale, Benton's test for visual retention).

Mental retardation is inborn mental deficiency due to congenital or acquired at early stages adverse impacts (hereditary factors, mother's diseases during pregnancy (intoxication, infection), a physical injury of the fetus, a difficult childbirth causing a cerebral haemorrhage or brain injuries in a newborn) and manifesting itself by general psychic underdevelopment and intellectual defect.

Oligophrenia is divided into idiocy, imbecility and debility.

Idiocy - IQ 20 and less. Patients with a deep degree of idiocy are characterized by absence of speech, they do not recognize their people, their facial expression is vacant, their attention is almost not attracted by anything; they swallow food without chewing it well. A sharp decrease in all kinds of sensitivity is noticed. Such patients begin to walk late. Their movements are poorly coordinated. They do not respond to other people's facial expression and gesticulation, they are slovenly in relieving nature and are not capable of self-servicing. Sometimes it is possible to observe stereotyped movements, e.g., pendulum-like swings of the head or trunk from side to side.

Idiocy of the moderate and mild degrees is characterized by an ability to laugh and weep, some understanding of other people's speech, facial expression and gesticulation. Such patients are able to fix their look on objects. There is some development of the orientation reflex in them. They can independently eat food, but do

it untidily; they may comprehend some simplest situation, and though they orientate themselves in a familiar place, they absolutely lose any orientation in time. Their vocabulary is limited by several dozens of words. They recognize their relatives and friends and may demonstrate an elementary attachment.

Imbecility – IQ 21-50. In case of imbecility, the patient's speech is more or less developed. But its development takes place with a delay, the patients begin to talk during the 3rd-5th year of their life. The stock of words is extremely poor. The patients understand other people's speech, facial expression and gesticulation within the range of their constant use. They do not comprehend a new situation to the end and need help, directions and guidance. They master the simplest skills but display them carelessly. With difficulty, they learn counting up to 20, can learn letters of the alphabet by heart, but are not able to master reading and writing.

Debility is a mild form of oligophrenia, IQ 51-70. The patients possess a significantly larger vocabulary than in imbecility, but lack flexibility of speech and mostly resort to stereotyped expressions, hackneyed phrases, learned turns of speech. It is not in rare cases that speech defects in the form of lisping and agrammatisms are observed. Differentiated movements are insufficiently developed, but simple forms of labour activity may be mastered. It is possible to teach such patients in conditions of auxiliary school.

Dementia – acquired mental defect with predominant intellectual function disorder.

Lacunar dementia is characterized by a decrease in the capacity for work, a progressive loss of knowledge and skills, an irregular weakening of memory (professional knowledge, skills and automated actions can be for a long time remain), poor judgements, affective instability, loss of flexibility in mental processes, deterioration of adaptability, decrease of self-control. But the patient's attitude to the surroundings, his relatives and friends remains like it was before, a sphere of interests undergoes little changes, the convictions formed before are preserved. The personality becomes poor, but preserves its own system of relations, basic moral-ethic properties. In such cases one says about an organic decrease in the level of the personality, formation of "a residual personality". It occurs in the clinical picture of cerebral atherosclerosis, diabetic microangiopathy, syphilis of the brain.

In total dementia, a complete disintegration of the personality takes place. It is characterized by a sharply expressed narrowness in the sphere of interests coming to satisfaction of the elementary biological necessities. In the first turn, the highest levels of the personality and higher emotional manifestations suffer here. The patients are roughly uncritical to their mental deficiency. It is observed in degenerative disease of Alzheimer's, Pick's, in meningoencephalitis.

The frontal syndrome is a combination of signs of total dementia with a lack of spontaneousness or, on the contrary, with general disinhibition. It is observed in organic lesions of the brain with a preferential impairment of its frontal lobes: tumours, brain injuries, Pick's disease.

Capgras' syndrome (named after J.M. Capgras) manifests itself by a disturbance in recognizing people. The following syndromes are distinguished: the syndrome of a *positive double*, when the patient regards unfamiliar people as his friends, and the syndrome of a *negative double*, when the patient does not recognize his relatives and acquaintances, considers them as dummies, twins, doubles of his relations.

MENTAL DISORDERS IN INFECTIOUS AND SOMATIC DISEASE, TUMORS AND BRAIN INJURIES.

Mental disorders in vascular diseases

In ICD-10, mental disorders in vascular diseases of the brain belong to section F00-F09 as “Organic, including symptomatic, mental disorders”. The leading syndrome is encoded with a corresponding third sign. All the diseases, accompanied by changes in the cerebral vessels, may cause similar psychopathological manifestations. The clinical manifestations of mental disorders in vascular diseases of the brain have a number of peculiarities owing to the complex character of their pathogenesis. These diseases are characterized by all the features of somatogenic mental disorders, as well as the peculiarities caused by disturbances in the blood supply of the brain proper.

A high prevalence of cerebral vascular diseases, particularly increasing in people of a middle and old age, makes the study of the mental disorders, possible in this pathology, by general practitioners quite urgent.

Classification of mental disorders in cerebral vascular diseases

1. Neurosis-like syndromes
2. Psychopathy-like syndromes
3. Defect-organic states:
 - 3.1. Psychoorganic syndrome
 - 3.2. Dementia
 - 3.3. Korsakoff's syndrome
4. Psychoses:
 - 4.1. Acute vascular psychoses
 - 4.2. Endophorm vascular psychoses

Neurosis-like syndromes. The clinical picture of initial manifestations in cerebral atherosclerosis is characterized by slowly intensifying neurosis-like symptoms in the form of short temper, reduced concentration of attention, increased fatiguability, a decrease in the capacity for work. These phenomena are accompanied by other signs of initial manifestations of a chronic circulatory insufficiency of the brain: headaches, dizziness, tinnitus. Typical sleep disturbances manifest themselves by difficult falling asleep, frequent cases of waking up at night, absence of the feeling of rest after sleep and often sleepiness at daytime. Many patients reveal expressed sensitivity to weather changes. They suffer from cardiophobia, annoying fears of death, height, traffic, large crowds, etc.

Patients with atherosclerosis develop a lack of restraint of emotions in the form of faint-heartedness (excessive tearfulness). Short temper is often accompanied by affects

of anger changing into the feeling of repentance. These patients easily develop various negative emotions (dissatisfaction, short temper) which are overcome with a great difficulty.

Psychopathy-like syndromes. A further progress of the morbid process results in a “caricatured” increase of premorbid streaks of the personality, figuratively termed as a “caricatured distortion of the personality”. For instance, restless people become expressively anxious, mistrustful ones suspicious, hot-tempered ones still more unrestrained, economical ones very misery.

Defect-organic disorders. In the process of progressing of organic disturbances in the brain the patients develop the psychoorganic syndrome manifested by the loss of ability for fine differentiation in thinking, a gradual decrease in the capacity for work, a reduced criticism, disturbances of attention and memory.

Most frequently such patients complain of memory disturbances, which at first are limited by hypomnesia: it is difficult for the patients to memorize new information, current events, names and dates. Later a gradual loss of deeper and deeper layers of information (by Ribot’s law) is observed. Typically, the patients have a critical attitude to their state and feel depression because of realization of their insolvency, make attempts to use detailed notes for compensation of their memory disturbances. Korsakoff’s syndrome may develop at later stages. As the disease progresses, the patients’ thinking changes: an excessive detailing, concentration on minor things appear, the patients find it difficult to isolate the main idea, they switch over from one subject to another. Then stiffness of thinking develops. A significant expressiveness of disturbances in the thinking and memory, an emotional lability and lack of restraint at the later stages of the illness result in behavioural disorders. The above state may remain stable for a long period of time and give place to dementia not in all the patients. Cerebral atherosclerosis is typically characterized by lacunar dementia, when individual peculiarities of the personality are preserved and the patients critically assess their intellectual defect. In hypotonia, the psychoorganic syndrome and dementia do not develop.

Acute vascular psychoses. These may develop in the form of delirium, amentia, more seldom the oneiroid syndrome and a twilight state of consciousness in case of an acute decompensation of the cerebral circulation caused by various unfavourable factors (an impaired activity of the cardiovascular system, an exacerbation of some chronic or appearance of an acute somatic disease, intoxication, psychic traumas). In delirium, visual hallucinations are less bright than in delirium tremens. A sharp increase in blood pressure after a period of anxiety may give rise to amentia.

Endoform psychoses. Patients with the hypertensive disease and atherosclerosis may develop protracted psychotic states in the form of the depressive, paranoid syndromes and that of hallucinosis. The clinical picture of protracted vascular psychoses is characterized by a variety of symptoms: the asthenic background, signs of an intellectual-mnemonic decrease. The depressive syndrome develops in about 50 % of cases, most frequently after psychic traumas or a change of the life stereotype. At first, the patients reveal intensification of their asthenic and neurotic symptoms, later there is a gradual worsening of the mood, with appearance of anxiety, fear, restlessness. Sometimes the patients express delusions of self-condemnation and self-humiliation, or those of persecution and hypochondriacal ones, the latter being based on unpleasant sensations in the internal organs. As a rule, the patients with depression of the vascular genesis do not avoid their associates and express sympathy to other patients.

Approximately every fourth patient with vascular psychoses reveals the paranoid syndrome. At first, they develop suspiciousness, anxiety, fear, later delusions of persecution, reference, jealousy, poisoning, hypochondriacal ones. The delusions have many subjects, they are not systematized, do not tend to expansion, and often are accompanied by auditory and visual hallucinations. The patients' behaviour is more often passive-defensive, aggressive actions are rare.

The treatment of hypertensive disease must be complex, constant and strictly individual. *The treatment* of cerebral atherosclerosis is more effective at early stages of the disease; it must be complex and prolonged. The therapy is aimed at normalization of lipid metabolism and cerebral haemodynamics, activation of nerve cell metabolism, control of psychopathological disorders. Drug hypotensive therapy must be combined by indications with psychopharmacotherapy and psychotherapy.

Atherosclerotic psychoses are controlled with help of neuroleptics. The use of neuroleptics should begin with small doses, preferably small doses of more potent drug preparations before large doses of less potent ones. The depressive syndrome requires administration of antidepressants; preferable are drugs from the group of selective inhibitors of serotonin uptake due to their larger safety and tolerance. In anxious disorders, tranquillizers by short courses and serotonergic antidepressants are indicated. The treatment in case of atherosclerotic dementia is of low effect, in order to slow down the progress of the disease and nootropic drugs are recommended.

For *the prevention* of atherosclerosis, it is recommended to restrict a diet rich in cholesterol, exclude intoxications (alcoholism, smoking), prevent mental and physical overstrain, ensure a correct organization of labour and rest.

The psychotherapy is directed at formation of a rational attitude to the disease, training in the skills of relaxation and expression of emotions. When administering drug preparations it is necessary to employ mediated psychotherapy which forms confidence in the efficacy of the treatment. Rational, hypnosuggestive and narcopsychotherapy are used.

In order to prevent the hypertensive disease, it is very important to remove all the factors causing the state of affective tension. Normalized family relations, a correct organization of labour and rest, physical exercises, a diet regimen, exclusion of intoxications – all these factors contribute to prevention of the hypertensive disease, also producing a good therapeutic effect in its initial stages.

Mental disorders in infectious diseases:

Mental disorders develop practically in all acute and chronic infections. They are often accompanied by disturbances of consciousness in the form of the delirious and oneiroid syndromes, amentia, torpor, a twilight state of consciousness (epileptiform excitement). At the same time, chronic psychoses are oftener characterized by endoform manifestations (hallucinoses, hallucinatory-paranoid syndrome, apathetic stupor and confabulosis). In some cases there is development of organic, irreversible states in the form of the psychoorganic, Korsakoff's syndromes and dementia.

Depending upon the character of a lesion of the brain, the following disturbances are distinguished: 1) symptomatic mental disorders, which result from an intoxication, an impairment in the cerebral haemodynamics, hyperaemia; 2) meningoencephalitic and encephalitic mental disorders caused by inflammatory processes in the meninges, vessels and matter of the brain; 3) encephalopathic disorders which develop as a result of postinfectious degenerative and dystrophic changes in the brain structures.

Classification of mental disorders of the infectious genesis:

a) syndromes of disengagement of consciousness (a nonpsychotic change): obnubilation, somnolence, sopor, coma; b) functional nonpsychotic syndromes: asthenic, asthenoneurotic, asthenoabulic, apathoabulic, psychopathy-like; c) psychotic syndromes: delirious, oneiroid, catatonic, paranoid and hallucinatory-paranoid, asthenic confusion, a twilight state of consciousness, amentia, hallucinoses; d) psychoorganic syndromes: simple psychoorganic, Korsakoff's amnesic, epileptiform, dementia, parkinsonism.

In case of a mild course of an infectious disease, mental disorders are limited by nonpsychotic manifestations, while in severe acute infections and exacerbations of chronic infections the asthenic states are combined with the syndromes of disengagement and cloudiness of consciousness.

Recently, owing to the pathomorphism of the mental pathology, mental disorders in infectious diseases most often manifest themselves by disturbances at the nonpsychotic, border-line level, mostly represented by the asthenic syndrome which is accompanied by pronounced autonomic disturbances, cenesthopathic, hypochondriacal, obsessive phenomena, disturbances in the sensory synthesis. Emotional disorders are more frequently characterized by depressive manifestations, often with a dysphoric tint: with low spirits, maliciousness, short temper. In a protracted course of a disease there is formation of the personality shifts, the character changes, and excitability or streaks of diffidence, anxiety and nervousness appear. These symptoms may be rather stable.

Mental disorders in encephalitis are represented by acute psychosis with confusion, affectiveness, hallucinations, delusional disorders and catatonoid, development and psychoorganic of Korsakov syndrome.

The course of mental disorders in infectious diseases has its age-specific peculiarities. Thus, in children with acute infections manifesting themselves by an elevation of their body temperature, mental disorders are vivid and accompanied by general disinhibition, stubbornness, anxiety, attacks of fear, nightmares, delirious episodes with frightening hallucinations. At the initial period of an infectious disease children may complain of general weakness, headache, disturbances of sleep (difficult falling asleep, night fears), capriciousness, tearfulness, some visual hallucinations, particularly at night.

Children at the acute stage of an infection often develop torpor, sopor and coma, predelirious states: short temper, capriciousness, anxiety, nervousness, hypersensitivity, weakness, as well as superficial perception, attention and memorization, hypnagogic illusions and hallucinations. Children before 5 years of age often have convulsive states and hyperkineses, while productive signs in them are very rare and manifest themselves in motor excitement, disinhibition, rudimentary delirious states, illusions.

At the period of convalescence, against a background of the asthenic syndrome, children may develop fears, psychopathy-like disorders, puerile forms of behaviour, defective memory for current events, a delay in their psychophysical development. In epidemic encephalitis, children and juveniles develop psychopathy-like disorders, an impulsive motor anxiety, disturbances of drives, foolishness, asocial

behaviour, an inability to carry out systematic psychic activity with absence of dementia. Meningitides in younger children are accompanied by listlessness, adynamics, drowsiness, torpor with periods of motor anxiety. Convulsive paroxysms are possible.

The diagnosis of infectious psychosis can be made only if there is an infectious disease. Acute psychoses with syndromes of disturbed consciousness most frequently develop against a background of acute infectious diseases, protracted psychoses are typical for a subacute course of an infectious disease.

The treatment of infectious psychoses is provided at mental hospitals or infectious in-patient departments under the observation by a psychiatrist and supervision by the personnel; it includes active treatment of the basic disease in the form of immune therapy, administration of antibiotics, disintoxication, dehydration, general health improving therapy. Psychoactive drugs are administered with regard for a leading psychopathological syndrome.

In acute infectious psychoses with cloudiness of consciousness or acute hallucinosis, neuroleptics are indicated. Protracted psychoses are treated with neuroleptics taking into consideration psychopathological signs: aminazine and other neuroleptics with a sedative effect. In depressive states, antidepressants are administered which can be accompanied by neuroleptics if the patients agitate. In the psychoorganic and Korsakoff's syndromes, nootropic drugs are widely used. In patients with prolonged protracted psychoses, as well as irreversible psychoorganic disorders, it is important to carry out rehabilitative measures, including an adequate solution of their social-occupational problems.

Acute infectious psychoses usually pass without leaving any traces, but often infectious diseases are followed by development of pronounced asthenia with emotional lability and hyperaesthesia. It is considered to be prognostically unfavourable if muttering delirium develops with deep cloudiness of consciousness and a sharply pronounced excitement in the form of disorderly tossing, particularly if this state is preserved when the body temperature falls. Protracted psychoses may result in personality changes by the organic type.

Mental disorders in brain injuries

Brain injuries are some of the most frequent causes of mortality and steady loss of capacity for work; annually the number of patients with a traumatic injury of the brain increases by 2 %. In the structure of peace-time injuries, the life, transport, industrial and sports ones prevail. Such complications of brain injuries as development of the epileptiform syndrome, traumatic cerebraesthesia, encephalopathy, dementia,

pathocharacterological disorders and their influence on the social adaptation of patients are of a great medical importance. In more than 20 % of cases, brain injuries cause disability owing to neuromental diseases. Brain injuries are divided into open (involving skin integuments and skull bones) and closed ones. In its turn, open injuries are subdivided into penetrating (with impairment of the dura) and nonpenetrating ones. They always give rise to complications in the form of meningoencephalitis, abscess, osteomyelitis. Among closed injuries, there are concussions (commotions) which occur most frequently, as well as contusions and compressions. It is not in rare cases that a concomitant injury of the brain is observed.

Mental disorders caused by a brain injury depend upon the period of the traumatic disease. Thus, **at the most acute initial period**, torpor, sopor, coma, disturbances in the cardiovascular activity and respiration are observed.

The acute period is more frequently characterized by nonpsychotic syndromes (asthenic, apathoabulic syndromes, epileptiform seizures, anterograde and retrograde amnesia, surdomutism) and rarer by psychotic ones (a twilight state of consciousness, posttraumatic delirium, dysphoriae, Korsakoff's syndrome).

At **the late period**, nonpsychotic disorders are observed: the asthenic, asthenoneurotic, epileptiform, psychopathy-like (affective instability) syndromes, while late posttraumatic psychoses (hallucinatory-paranoid, manic-paranoid, depressive-paranoid) occur significantly rarer.

Remote consequences of a brain injury include cerebraesthesia, encephalopathy, dementia, posttraumatic epilepsy, a posttraumatic development of the personality.

Traumatic cerebraesthesia, developing in 60-75 % of cases, is the most frequent consequence of a brain injury. The clinical picture of the disease is characterized by prevalence of some gradually increasing weakness, a reduction of the mental and physical productivity, accompanied by shortness of temper and exhaustion. There are transitory fits of short temper, after which the patients usually regret their lack of restraint. Autonomic disturbances manifest themselves by fluctuations in blood pressure, tachycardia, dizziness, headache, sweating, vestibular disorders, a disturbance in the sleep-awaking rhythm. The patients badly endure going by transport, swinging, watching TV. It is not in rare cases that they complain of feeling unwell after changes of the weather and when staying at some stuffy premises. Typically, torpidity and rigidity of nervous processes are observed. Ability for a rapid switch-over from some activity to another is reduced, but a forced necessity to do this work results in decompensation of the state and an augmentation in the expressed cerebraesthetic symptoms. Traumatic cerebraesthesia is often combined with different neurosis-like symptoms, phobiae,

hysterical reactions, autonomic and somatic disorders, anxiety and subdepressive symptoms, autonomic paroxysms.

Traumatic encephalopathy develops against a background of residual phenomena of an organic brain lesion, whose localization and severity cause peculiarities in the clinical picture. The most frequently observed are affective disorders with underlying psychopathy-like disorders of the excitable and hysteric types. Patients with the apathetic variant of encephalopathy are characterized by expressed asthenic disturbances with prevalence of exhaustion and fatiguability; they are listless, inactive, with a reduced sphere of interests, memory disturbances and difficult psychic activity. Emotional excitability in these patients prevails over exhaustion; they are rough, hot-tempered and inclined to aggressive actions. Fluctuations in their mood are observed, inadequate fits of anger easily develop. The productive activity may be hampered owing to affective disorders, it causing still more dissatisfaction with themselves and responses of irritation. The patients' thinking is characterized by inertness and a disposition to stick to unpleasant emotional feelings. Dysphoriae may develop in the form of fits of depressed-malicious or anxious mood lasting several days; at this time the patients may make aggressive and autoaggressive acts, demonstrate a disposition to vagrancy (dromomania).

Epileptiform paroxysmal disorders (posttraumatic epilepsy) may form at various terms following a brain injury suffered, most frequently after several years. They may be various, such as generalized, Jacksonian seizures, paroxysms without contractions: absences, fits of catalepsy, so-called epileptic sleeps, psychosensory disorders (metamorphopsiae and disorders in the body scheme). Appearance of autonomic paroxysms with expressed anxiety, fear, hyperpathy and general hyperaesthesia is possible. Fits of contractions may be frequently followed by twilight states of consciousness, thereby demonstrating an unfavourable course of the disease. They are often caused by additional exogenous factors, first of all alcoholic intoxication, as well as by psychic traumatization. The duration of twilight states is not long, but sometimes it may last up to several hours.

Within the remote period of a brain injury, so-called endoform (affective and affective-delirious) psychoses may develop. Affective psychoses pass in the form of monopolar maniac or, rarer, depressive states. They are characterized by an acute onset, an alternation of euphoria with anger, moria-like foolish behaviour. It is not seldom that a maniac state appears against a background of exogenous factors (intoxications, repeated injuries, surgical interventions, somatic diseases).

Affective-delirious psychoses are characterized by hallucinatory-delirious and paranoid syndromes. As a rule, hallucinatory-delirious psychoses develop acutely

against a background of symptoms of traumatic encephalopathy with prevalence of apathetic disturbances. The risk of falling ill with the disease increases in patients with somatic disorders, as well as after surgical interventions. Their delusion is concrete and not systematized, the hallucinations are true, there is an alternation of psychomotor excitement and inhibition, the affective feelings are caused by delusions and hallucinations. Depressive states may be triggered by psychic traumas. Along with melancholia, the patients develop anxiety, hypochondriacal feelings with a dysphoric assessment of their own state and surroundings.

Paranoic psychoses develop more frequently in males 10 and more years after a brain injury. The clinical picture is characterized by presence of overvalued ideas and delusions of jealousy with litigious and querulous tendencies. The paranoic delusions of jealousy may be combined with the delusions of damage, poisoning, persecution. The psychosis has a chronic course and is accompanied by formation of the psychoorganic syndrome.

Posttraumatic dementia develops in 3-5 % of cases of a brain injury. It may either be a consequence of posttraumatic psychoses or the progressive course of the traumatic disease with repeated injuries, as well as result from a developing cerebral atherosclerosis. Patients with posttraumatic dementia are characterized by prevalence of memory disturbances, a reduced sphere of interests, listlessness, faint-heartedness, sometimes importunity, euphoria, disinhibited drives, overestimation of their abilities, absence of criticism.

Age-specific peculiarities of the traumatic disease. Brain injuries in children occur rather frequently, especially at the age from 6 to 14 years. Mental disorders in children at the acute period appear against a background of an increased intracranial pressure: they reveal general cerebral and meningeal disturbances, expressed autonomic and vestibular symptoms and signs of a local brain lesion. The most severe symptoms develop a few days after a brain injury. Paroxysmal disorders, which occur both at the acute period and during convalescence, are a frequent symptom. As a rule, the course of the traumatic disease in children is benign, even severe local disorders are subject to regression. Asthenia within the remote period is slightly expressed, while motor disinhibition, emotional lability and excitability prevail. Sometimes after severe brain injuries, which patients suffered in early childhood, they reveal a mental defect resembling oligophrenia.

In young children (up to 3 years of age), no complete disengagement of consciousness is usually observed, their general cerebral disorders may be obliterated. Multiple vomiting and autonomic symptoms (an elevated body temperature, hyperhidrosis, tachycardia, dizziness, etc.) are clear signs of a brain injury. Typically, an

arrhythmia of sleep and waking is observed. The child would not sleep at night and is sleepy at daytime.

Traumatic cerebraesthesia in children manifests itself by headaches, which appear suddenly or under certain conditions (at stuffy premises, because of running or some noise); dizziness and vestibular disorders are less frequent. The expression of asthenia proper may be very poor, while motor disinhibition, lability of emotions, excitability, autonomic vascular disturbances (intensified vasomotor reactions, a bright dermatographism, tachycardia, hyperhidrosis) prevail. The apathoadynamic syndrome in children is characterized by listlessness, apathy, sluggishness, a reduction of activity and striving for it, limited contacts with their associates owing to rapid exhaustion, and a lack of interest. Such children are not able to cope with their school syllabus, but they do not disturb their associates and do not rouse any censure from their teachers.

Children with the hyperdynamic syndrome have prevalence of motor disinhibition, fussiness, sometimes with high spirits and a tint of euphoria. Such children are excited, restless, they would run, make a noise, often jump up, grasp some things but then throw them. Their mood is characterized by instability and carelessness. Outwardly, the patients are good-natured, suggestible, sometimes foolish. A reduced criticism and difficult mastering of new knowledge are observed. It is not in rare cases that a further development of these disorders result in some more differentiated psychopathy-like behaviour. The children cannot get on with their classmates, do not master new knowledge, violate discipline, disturb their associates, terrorize their teachers. Owing to the fact that such patients do not produce any complaints about their health, for a long period of time their inadequate behaviour is not regarded as morbid and only disciplinary demands are made to them.

Mental disorders after brain injuries in elderly people are usually accompanied by a loss of consciousness. The acute period is characterized by prevalence of autonomic and vascular disturbances, dizziness and fluctuations in blood pressure, while nausea and vomiting occur rather rarely. Owing to a defective vascular system, intracranial haemorrhages are often observed; they may develop some time later and manifest themselves by a clinical picture resembling that of a tumour, or epileptiform seizures. Stable asthenic disturbances, listlessness, adynamia and various psychopathological symptoms are more constant in the remote period.

Pathogenesis of mental disorders in the brain injury. Appearance of mental disorders within the acute period of the brain injury is caused by a mechanical damage and oedema of the cerebral tissue, development of haemodynamic disturbances and cerebral hypoxia. In this case, transmission of impulses in synapses is affected, and disturbances develop in the mediator metabolism and functions of the reticular

formation of the brain stem and hypothalamus. Brain injuries of the mild degree are accompanied by an insignificant destruction of nerve cells with a subsequent restoration of their functions, while in severe injuries there is a death of neurons with development of gliotic cicatrices or cystic formations. A disturbance of synaptic relations between nerve cells, traumatic asynapsis, may be observed.

Pathogenesis of mental disorders in the remote period of the brain injury is various, the character and expressiveness of disturbances depend upon the severity of the injury, the patient's age and additional hazards. Very important are repeated injuries, addition of alcoholism and a pathological vascular process.

A favourable prognosis in brain injuries is observed in the following cases: an absolute attenuation of the main active traumatic process and its complications, and absence of general cerebral disorders; locality of the injury and a partial character of the mental defect (isolated phenomena of dysfunction, a single syndrome or feebly expressed mental changes); a comparative preservation of the intellect and social-occupational directions of the personality; a young age of the patient; absence of any severe concomitant nervous and somatic diseases and expressed signs of a psychopathy in the patient before the injury; an opportune enlistment to work in compliance with the patient's interests and his professional abilities.

At the same time, an unfavourable prognosis is observed in such cases as: a continuing reduction of the intellect with development of organic dementia in some patients; expressed, stable or increasing changes in the personality by the organic type; protracted psychoses with hallucinatory-paranoid, hypochondriacal and depressive syndromes that develop for the first time many months and years after the injury; epileptiform manifestations which become more frequent or appear for the first time after several years; an increasing asthenization of the patient with a reduction in his capacity for work. The prognosis in consequences of the brain injury is worsened by presence of comorbid alcoholism.

The treatment of mental disorders in brain injuries depends upon the stage of the disease, its severity and expressiveness of clinical manifestations. All the persons who received even a slight injury of the head, must be hospitalized and follow bed regimen during 7-10 days, children and elderly people require a more prolonged stay at in-patient department. In case of the symptoms demonstrating an increased intracranial pressure, dehydration is recommended. Autonomic disturbances are controlled with tranquillizers, and oxybarotherapy is recommended for reducing cerebral hypoxia. Neuroleptics, large doses of Diazepam (up to 30 mg intramuscularly) and sodium oxyburate are administered for productive psychopathological symptoms and excitement. At the period of convalescence it is recommended to use general health

improving therapy, nootropic drugs, vitamins; neuroleptics are used in case of excitement.

The remote period of the brain injury requires a complex of therapeutic and rehabilitative measures consisting of psychotherapy, an adequate job and social rehabilitation of the patient. Drug therapy is administered depending upon prevalence of some or other symptoms in the clinical picture. Thus, anticonvulsive therapy is recommended in treating epileptiform disorders, antidepressants for affective depressive disorders, etc.

Long therapy and an adequate job are particularly important in the progressive course of the traumatic disease, it contributing to stabilization of the pathological process and reverse development of some morbid symptoms. The prognosis of mental disorders significantly depends upon the fact how correctly the patient follows recommendations and regimen.

In slight concussions of the brain, the patients may be disabled up to 1 month, in moderate ones up to 2 months, and in severe ones for 4 months and longer. An invalidity examination must be carried on with regard of the part played by rehabilitative measures. The patient's job should correspond to his state and abilities. Job recommendations must take into consideration presence of inertia of nervous processes that results from the brain injury and remains for a long period of time. For such patients, any job requiring a rapid switching over from some activity to another is not recommended, large physical and mental loads are contraindicated. The most complete restoration of the capacity for work takes place in patients with the asthenic syndrome.

Mental disorders in AIDS

Acquired immunodeficiency syndrome (AIDS) is one of the most dramatic and mysterious problems of modern medicine. Mental disorders in AIDS are so various that actually they include all the varieties of psychopathology, beginning with neurotic reactions and ending with severe organic lesions of the brain. Just because of this variety of mental disorders AIDS is sometimes called psychiatric encyclopaedia or psychiatric odyssey. In epidemiological studies, the people who have a seropositive reaction to AIDS but no signs of this disease make up a so-called grey area which is the first risk group. The people without any signs of the disease and no seropositive reaction to AIDS, but with a specific life style (homosexuals, bisexuals, narcomaniacs, prostitutes) belong to a so-called group of risk. This is the second risk group. People of these two risk groups also reveal a whole number of mental disorders requiring opportune diagnosis.

The spread of mental disorders in AIDS on the whole corresponds to the spread of the disease itself, because, as most authors report, in one or another way they occur actually in all the patients.

Classification of clinical manifestations in people of risk groups:

The first group (a “grey area”) consists of persons affected by AIDS virus. Though seropositivity by AIDS virus is a risk factor, it does not always show presence of this disease in a human being. The incubation period between the viral infection and development of the disease lasts from 1 month to 5 years.

The second risk group includes the people who are the most vulnerable to a danger of AIDS infection, i.e. those engaged in narcomaniae, homosexuality and prostitution. A smaller part is composed of bisexuals, heterosexuals with numerous occasional intercoursures, and those who suffer from haemophilia or another disease requiring frequent blood transfusions.

Mental disorders in each of the risk groups are similar, though in the so-called grey area their rate is much higher. These are, first of all, psychogenic disorders with neurotic and neurosis-like symptoms, though sometimes they acquire the form of psychotic ones with resultant anxiety, nervousness, shortness of temper, sleeplessness, loss of appetite, sometimes with a very expressed loss of body weight. Such patients are characterized by a reduced capacity for work with a disturbance of active attention, sometimes with absolute concentration on thoughts about a possibility to fall ill with AIDS. Also common for these people are constant rereading of literature about this disease, endless searches of some or others of its symptoms in themselves, a hypochondriacal fixing on their own state of health. Initiative is significantly reduced, a feeling of hopelessness develops, libido decreases, though many patients break off all their sexual relations not because of this fact, but out of some fear “to fall ill with another bad disease”. Significantly less people break off all sexual intercoursures out of altruistic motives.

Some people of the risk group (especially seropositive ones), on the contrary, display evident antisocial tendencies, seeking either to broaden their sexual relations as much as possible or to communicate AIDS in another way. Typical for this group are the states in the form of apathetic, anxious or melancholic depression with frequent ideas of self-condemnation (which usually do not reach to the degree of delusions) and suicidal thoughts, though suicidal attempts in the risk group occur rarely. Sometimes depression in these people acquires a psychotic character with agitation up to the appearance of the state of raptus melancholicus type. Patients from this risk group may also develop psychotic states in the form of sensitive delusions of reference, reactive

delusions of persecution, hypochondriacal delusions accompanied by a described “feeling of untouchability”. Hysterical psychoses are also possible.

People from the risk group often develop psychosomatic diseases, first of all various pathologies of the alimentary tract.

The AIDS virus has both lymphotropic and neurotropic properties, i.e. it directly affects cells of the cerebral cortex; this fact explains development of mental disorders long before the appearance of signs of reduced immunity in the patient. A few months, sometimes even years before the manifestation of the illness many AIDS patients suffer from apathy, sleep disturbances, a reduced capacity for work, depression, narrowing of their sphere of personal contacts. But at this stage mental disorders are most frequently revealed at a so-called subclinical level.

With the appearance of expressed clinical manifestations of the illness in the form of fever, profuse perspiration at night, diarrhoea, pneumonia, etc., all these mental disorders become clinically expressed and evident.

The fact of presence of AIDS is regarded as a manifestation of expressed psychological stress with prevalence of mostly psychogenic disorders of both the neurotic and psychotic register at early stages of the illness (“the stage of realization of the disease”). Most frequently, this is depression accompanied by anguish with ideas of self-condemnation, guilt to one’s relatives, suicidal thoughts and tendencies. But, as most authors report, committed suicides occur relatively seldom. Most frequently they are observed in those people who were witnesses to their relatives or friends’ death, caused by AIDS, or are psychopathic persons. Suicidal actions are also made by those patients whom the society treats as some strangers, rejects them, does not allow to attend public places, sometimes even live in their city. This period is also characterized by appearance of obsessive-compulsive disturbances developing with or without depression. The patients complain of some annoying fear of death, annoying representations about the very process of “dying”, recollections about their sexual partners who could infect them. Some patients are very troubled by the thought (often annoying) about a possibility to infect their relatives or friends in everyday life, though they understand its absurdity.

Already at this stage, organic symptoms “sound” clearly: the patients develop dysphoriae, psychopathy-like forms of behaviour with explosiveness, irateness, aggressiveness, epileptiform seizures. A so-called psychological disorganization takes place. Often the anxiety which appears in the people after making a diagnosis of AIDS is accompanied by agitation, panic, anorexia, insomnia, as well as a feeling of irreparability and anger, often aimed at doctors. Here, anosognosia may be observed,

when the patients deny presence of the illness in them, do not trust their doctors, accuse them of incompetence. Later, as the illness progresses, signs of an organic lesion of the brain become more and more evident. At the stage of formation of expressed signs of an organic defect, various psychotic disorders develop. Most frequently, these are states of cloudiness of consciousness, mostly in the form of delirium, acute paranoid, hypomaniac and maniac states. Therefore, psychopathological manifestations of AIDS are similar to the feelings of cancer patients at its terminal stage.

The main manifestation of AIDS consists in a brain lesion with a rapid growth of dementia described in 60-90 % of all the cases. In this connection, even such terms as “AIDS-dementia syndrome” or “AIDS-dementia complex” appeared. In 25 % of the observations, the AIDS-dementia complex may be revealed as early as in the manifestative period of the illness. Dementia develops in connection with diffuse subacute encephalitis, meningitis, meningeal and cerebral lymphoma (pseudotumour manifestations of the disease), cerebral haemorrhages, cerebral arteritides. The patients gradually feel it more difficult to concentrate their attention, they lose memory for current events, have spotty memory defects for the past, symptoms of lethargy. Very rapidly (within a few weeks or months) the patients develop intensifying signs of dementia with a psychomotor retardation, periods of cloudiness of consciousness (at first, by the type of a twilight state), epileptiform seizures, often turning into epileptiform status, mutism. Later these signs are accompanied by incontinence of urine and faeces, the depth of the disturbance of consciousness increases from torpor to coma. In each 10 of 13 cases computed tomography reveals total cerebral atrophy, speech disturbances usually being its first sign.

Of AIDS patients, 80 % die within two years; 90 % die at the age of 20-49 years, 93 % of them being males. Many researchers hold an opinion that just an organic lesion of the brain is one of the main causes of death in AIDS. Besides, the death may be caused by a sarcoma in 35 % of the cases or other malignant tumours, as well as various somatic diseases with a severe course. More than half of the patients (60 % of cases) die from double pneumonia.

Rather often the doctors have to differentiate mental disorders, caused by AIDS, from AIDS-phobia or delusions of AIDS infection. The number of such patients steadily increases because of a wide spread of materials about AIDS in mass media. In this connection, such terms as “pseudo-AIDS”, “pseudo-AIDS syndrome” and “AIDS panic” have recently become even widespread. A diagnosis to such patients is made on the basis of clinical-psychopathological methods of examination (naturally, if seropositivity is excluded). Making a differential diagnosis of mental disorders in AIDS which are similar to schizophrenic, involuntional and other symptoms, it is very

important to have the most detailed family and case histories, as it is not excluded that this AIDS patient before suffered, for example, from schizophrenia. In such a case, early stages of AIDS, prior to a sharp domination of organic dementia, may reveal various psychotic symptoms typical for endogenous psychoses. Symptoms of an organic lesion of the brain in AIDS require differentiation from quite a number of organic cerebral diseases having another etiology: multiple sclerosis, brain tumour, neurosyphilis, toxoplasmosis, Schilder's disease, meningitides and encephalitides of various etiology, etc. In such cases, the problem is solved by special tests for AIDS, which must be also carried out in cases of mental disorders in seropositive people from the risk group (a "grey area").

It is more difficult to diagnose mental disorders in people from the risk group without seropositivity. Such cases require the most careful objective and subjective anamnesis, the study of the "life style" of the people from the sphere of personal contacts of this person. Also it is very important to reveal a temporary relation between the appearance of some or other mental symptoms and a psychic trauma, somehow related to AIDS (a disease or even death of some of one's close friends or relatives), reading of literature, watching of films on this subject, etc.

The etiopathogenesis of mental disorders in AIDS is mostly caused by two factors: 1) a mental (psychological) stress after receiving information about an incurable disease and related intrafamilial, interpersonal and social problems; 2) general intoxication and increasing severe lesions of the cerebral tissues, first of all nerve cells.

The AIDS virus possesses expressed neurotropic properties and can be isolated directly from the brain tissue. By the data of pathomorphological studies, some or other changes in the cerebral tissues are found in 60-90 % of observations; they are: diffuse demyelination, disseminated perivascular changes, reactive gliosis, microfocal brain infarcts. These disorders are revealed actually in all the cerebral structures, it making the clinical picture of neuro-AIDS similar to other nosological forms based on pathomorphologically close lesions of the brain tissue. Pathomorphological cerebral changes in AIDS may resemble viral encephalitides of different origin, neurosyphilis, toxoplasmosis, disseminated metastatic lesions, multiple sclerosis, etc.

Treating mental disorders in AIDS patients, it is possible to use psychoactive medicines, tranquillizers, antidepressants of the tricyclic line, but in small doses owing to a high sensitivity of AIDS patients to any drugs, as well as to alcohol. Taking into consideration a possible development of frequent side effects, the treatment must be given with great care. There are some data that thioridazine is the least toxic. Though AIDS is incurable, but its course may be chronic with states of some

remissions, therefore relevant psychotherapeutic and psychocorrective work must be done not only with the patients, but also with their associates.

An augmentation of dementia should not be a contraindication for employing psychotherapy (especially supportive one) which will help the patients to cope, as far as possible, with a number of problems caused by intellectual defects. The programme of rehabilitation should also involve all the patients irrespective of the stage of the illness and its possible outcome.

EPILEPSY

Epilepsy is a chronic endogenous-organic disease of the brain characterized by partial and generalized spasmodic seizures, typical changes in the character and thinking which achieve the degree of dementia, as well as by a possible development of acute and chronic psychoses at some stages of the disease.

The general principles of classification of Epilepsy and epileptic syndromes by ethyology

Idiopathic	<ul style="list-style-type: none">- evidential disorders of CNS absents- genetic predisposition is known or probable
Symptomatic	<ul style="list-style-type: none">- etiology is known and morphological disorders are rmined
Cryptogenic	<ul style="list-style-type: none">- a cause is unknown, concealed- the syndromes are not correspond to idiopathic forms- proofs of symptomatic character are absent

Etiology and pathogenesis of epilepsy. Epilepsy is a disease with a multiple etiology and based on a change in the neuron activity, which becomes abnormal, periodic and increased with a resultant appearance of sudden high-amplitude outbreaks in a single group of neurons. This group of neurons forms an epileptic focus which generates a hypersynchronous discharge. The character of the subsequent spread of excitement along the neurons determines the kind of fits; thus, if the discharge is spread along both hemispheres then a generalized fit is produced, but if the excitement remains within the limits of the primary focus then a local (focal, partial) fit develops.

The disease strikes mostly children and juveniles. Its etiological factors include hereditary predisposition, as well as an effect of unfavorable environmental factors causing an impairment of the brain, particularly in the pre- and postnatal period. Depending upon its etiology, the primary (idiopathic, genuine) and secondary (symptomatic) types of epilepsy are distinguished. Symptomatic epilepsy may be caused by cerebrovascular disturbances, neural infections, brain injuries, an oedema of the brain, intoxications, degenerative diseases (Alzheimer's disease), endocrine disorders.

In epilepsy, there are disturbances of different kinds of metabolism (of proteins, carbohydrates, fats, water-electrolytes); recently, particular attention is paid to studying disturbances in the metabolism of GABA, whose decrease in the brain develops convulsions.

The clinical manifestations of epilepsy are represented by paroxysmal and nonparoxysmal signs of the disease. Epileptic paroxysms are subdivided into generalized and partial seizures, as well as various psychic equivalents. The clinical characteristics of an epileptic seizure are as follows: a) a sudden appearance (at any time of day or night, suddenly, irrespective of the situation); b) a short term (as a rule, a paroxysm lasts from a few seconds to several minutes); c) self-withdrawal (the seizure ceases spontaneously); d) recurrence with a tendency towards occurring more frequently; e) a “photographic” similarity of the seizures (clinical manifestations of each subsequent paroxysm almost absolutely coincide with previous seizures).

The most typical generalized epileptic seizures are a major spasmodic seizure, a minor seizure (absence), an epileptic status. A generalized tonic-clonic seizure (grand mal) may be preceded by such precursors as a change in the mood, a headache, a worsened general state developing some hours before the seizure. Just before the seizure some patients feel an aura in the form of stereotyped short-term (during a few seconds) autonomic, vestibular, sensory, motor, visceral or mental disorders. The seizure itself begins with a sudden fall and consists of two phases: *tonic and clonic*. In *the tonic phase* of the seizure, which lasts 20-30 seconds, convulsions involve all the skeletal muscles. Usually they prevail in the extensors. As a result of contraction of the muscles of the chest and abdomen, the air passes through a narrowed glottis, which may cause vocalization (an epileptic cry) lasting a few seconds, the eyes are usually wide open, the mouth is half-open. The convulsions begin from the muscles of the trunk, whereupon they pass to the extremities. Usually, the shoulder girdle is slightly raised and inwardly displaced. The arms are abducted and outwardly rotated, the forearms are half-bent. The muscles of the legs are not involved so intensively, usually there is a tendency towards bending and parting the legs with their outward turning.

The clonic phase consists of short-term flexion contractions of the muscles of the trunk and extremities with their rapid relaxation. The duration of the clonic phase is 2-3 minutes. Gradually, sharp contractions of the muscles become rarer, gaps of a reduced muscle tone longer, and the spasmodic contractions end. During both phases of the spasmodic seizure, some biting of the tongue and lips may be observed.

A generalized tonic-clonic seizure has such a characteristic component as mydriasis with areflexia of the pupils to the light, as well as hypersalivation which in combination with the tongue bite in the clonic phase of the seizure results in a discharge

of some blood-stained foamy contents from the mouth. During a seizure, hypersecretion appears in the salivary and other glands: sudoriferous and tracheobronchial.

Within 10-15 minutes immediately after the seizure, **the comatose period** comes; it is characterized by muscular atony with resultant involuntary urination because of relaxation of the sphincters. The pupillary and corneal reflexes are absent, while deep ones may be activated. The patients are absolutely unconscious (coma). Later, the mydriasis disappears, superficial reflexes are restored, and deep ones are decreased and often accompanied by Babinski's sign. This period usually lasts 5-15 minutes. After recovery of their consciousness the patients usually complain of a headache, pains in muscles, a bad general state; there is an absolute amnesia for the period of the seizure. The comatose state may also change into postictal (post-seizure) sleep.

Minor seizures (*petit mal*), absences are characterized by a sudden and short-term (2-30 seconds) disengagement of the consciousness, usually without the patient's falling down; they are accompanied by the patient's blank look, an interruption of his current activity, moderately expressed autonomic symptoms (some flushing or paleness of the face, a moderate mydriasis), though in short-term absences any clinical manifestations of the seizure often remain unnoticed. The seizure ends as suddenly as it began. Realization of the seizure is usually absent, an absolute amnesia develops, but in very short-term absences (2-3 seconds) there is not enough time for an absolute disengagement of the consciousness to develop.

The epileptic status (*status epilepticus*) is a severe complication of epilepsy: this is characterized by recurrent epileptic seizures and between them the patient's consciousness is not regained. The epileptic status requires urgent medical aid, as it gravely endangers the patient's health and life.

The causes of the epileptic status may be as follows: inadequate treatment, a sharp reduction of dosages or discontinued taking of antiepileptic drug preparations, resistance to them, as well as addition of other hazards (acute infections, intoxications, particularly taking of alcoholic drinks, a brain injury and somatic diseases).

The epileptic status is characterized by disturbance of the respiration, cardiovascular activity, haemocirculation, cerebral metabolism, acid-alkali and water-electrolyte balances.

In addition to the described above, there may be *generalized tonic seizures*, typical for children, and *generalized clonic seizures*, more common in infants, as well as myoclonic seizures characterized by bilateral synchronous manifestations, which are most vividly expressed in the shoulder girdle and arms. With lightning speed, the arms

would bend and the fingers part. If the seizure involves the legs, usually they bend too, and the patient would fall down to his knees or even on the ground.

Symptoms of *partial seizures* depend upon the localization of the focus. There are motor, sensory, autonomic-visceral seizures and those with disruptions of psychic functions. The most typical partial motor seizure is jacksonian one in the form of a local jerk or tonic tension in the muscles of the arm or leg, more frequently in its distal parts; the convulsions may spread along the whole extremity with involvement of the muscles of the trunk, face, the other extremity, often resulting in a secondary-generalized spasmodic seizure with loss of consciousness.

Seizures with disruption of psychic functions may have the following manifestations: an absolute or partial paroxysmal motor or sensory aphasia; difficulties in articulation of words and use of speech with preservation of the movements of the muscles necessary for speaking; short-term complex illusions when there is a violation in the assessment of the degree of novelty of the real life situation; an absolute amnesia within a certain, sometimes rather prolonged (a few hours) period of time within which the consciousness was clear and the behavior absolutely adequate; disturbances of thinking when the patients notice that their “thoughts are running or scattering with an unbelievable speed”, “they are difficult to follow” or, on the contrary, “the thoughts stick”, the thinking becomes retarded, “stiff”; short-term paroxysmal emotional disorders in the form of unpleasant emotional feelings, or sharply expressed fears, anxiety, visual, auditory, olfactory and gustatory illusions; visual hallucinations, usually colored, represented by motionless pictures or scenes with a decelerated or accelerated action; auditory hallucinations (significantly more seldom).

Contraction-free paroxysms are short-term mental disorders developing as a seizure equivalent. The following kinds of contraction-free paroxysms are distinguished:

- *twilight disturbance of consciousness*, accompanied by anxiety, terror, excitement, aggressiveness with a subsequent amnesia; here the patients may have visual, olfactory or auditory hallucinations, delusions of persecution, universal death, grandeur, reforming;

- *delirious state* with vivid visual hallucinations and tense affect;

- *oneiroid state* with a fantastic content of the feelings;

- *ambulatory automatism* in the form of short-term automated actions with an absolute estrangement from the surroundings, a disturbance of consciousness and a subsequent amnesia;

- *fugue* – a state of cloudiness of consciousness when the patients, estranged from their surroundings, would strive for running somewhere;

- *trance* – a prolonged disturbance of consciousness when the patients would move automatically, make unmotivated journeys or trips, sometimes at long distances;
- *dysphoria*, manifested by depression, melancholia, anxiety, maliciousness, tension, aggressive behavior;
- *specific states*, in the form of depersonalization and derealization with phenomena of metamorphopsiae accompanied by fear, melancholia, anxiety, hallucinations.

Personality changes in patients with epilepsy. The course of epilepsy is accompanied by formation of peculiar changes (of the epileptic character) in the personality of the patients, manifesting themselves by egocentrism, a combination of obsequiousness and sugariness with maliciousness, cruelty, vindictiveness, rancour, a so-called polarity of the character. The patients' sphere of interests gets narrowed; they become pedantic, fault-finding, with a tendency towards sudden dysphoric reactions. These patients are characterized by affective torpidity, i.e. sticking to negative emotions, offences, maliciousness which they accumulate in their consciousness; later there is an affective discharge in the form of a sudden aggression with unharnessed energy. In this state the patients are dangerous for their associates. A combination of affective torpidity, explosiveness and polarity of affects in epileptics gives rise to prolonged vindictive tendencies, which persist for years and often end with aggression.

A protracted course of the illness develops epileptic dementia characterized by a change in the thinking, a tendency towards detailing and torpidity, the patients are not able to separate the main things from minor ones. The thinking becomes concrete; there are disturbances of memory and a decreased stock of words. Diminutive and hypocoristic suffixes appear in the patient's speech.

Epileptic psychoses. In epilepsy, acute and protracted psychoses may develop; they are observed in about 2-5 % of epileptics. The course of acute psychoses may include cloudiness of consciousness (twilight, oneiroid, delirium, amentia) or be without it (acute affective and hallucinatory-paranoid states).

The most common form of acute psychoses with cloudiness of consciousness is a twilight state, which develops after a series of spasmodic seizures and is accompanied by excitement with an mental stress and aggression. Epileptic oneiroid is characterized by vivid fantastic hallucinations accompanied by various emotional feelings: fear, horror, delight.

The most common transitory psychoses without any cloudiness of consciousness are depressive-dysphoric states with a melancholic-malicious mood, delusions of reference, persecution, an increased aggressiveness and excitability. Rarer are depressive states with inhibition, as well as irate and merry maniae. Acute

hallucinatory-paranoid psychoses develop vivid imagery delusions, as well as verbal and visual hallucinations. Acute epileptic psychoses are transitory, their onset is acute, the recovery is critical, and they last from a few hours to 1-2 weeks.

Acute psychoses

<p>I. With cloudiness of consciousness (to several day)</p>	<ul style="list-style-type: none"> - twilight state - after a series or spasmodic seizures - continue to several day - hallucinatory and delirious disorders - psychomotor excitement, aggression - epileptic delirium - epileptic oneiroid
<p>II. Without cloudiness of consciousness (more than one day)</p>	<ul style="list-style-type: none"> - acute paranoid - dysphoric psychoses

Protracted epileptic psychoses originate at remote stages of the disease, 12-14 years after its manifestation. Their duration is from several months to a year or even more. The development of protracted psychoses is accompanied by a decrease in the rate of seizures or their discontinuation, as well as by normalization of EEG. The recovery from this psychotic state is lytic, with possible recurrences of the psychotic symptoms. Paranoid psychoses develop interpretative delusions with an ordinary content whose plot is connected with actions of concrete people and certain psychotraumatizing situations. More common, if compared with others, are ideas of reference, persecution, poisoning, jealousy, the patients being rather frank when they inform about their delirious feelings. In hallucinatory-paranoid psychoses, delusions are formed on the basis of verbal hallucinosis. In some cases, the structure of the main syndrome includes psychic automatisms, mentism. Sometimes in epilepsy there is formation of paraphrenic psychosis with megalomaniac delusions having a fantastic content, and with some peculiar interspersing of real events accompanied by enthusiasm. Much less common are catatonia-like states in the form of stupor, mutism, impulsive behavior.

Protracted epileptic psychoses (schizophrenic like)

General characteristics:

- they develop after 12-14 years of disease
- tendency towards progradency;
- with rood change of personality, decrease of intellect;
- most of time without disorders of consciousness ;
- they duration is from several months to several years ;
- more often with temporal localization of focus .

1. Paranoiac
2. Hallucinatory-paranoid
3. Paraphrenic
4. Catatonia-like states

The diagnosis of epilepsy is made on the basis of the following signs: recurrent seizures, changes in the personality, a tendency towards progradency. Very important signs of the illness are changes on EEG: 1) spikes (peaks); 2) sharp waves; 3) a sharp and a slow wave; 4) a spike and a wave with a frequency of 3 seconds, they are characteristic of typical absences (petit mal); 5) multiple spikes followed by a group of slow waves; 6) slow high-amplitude complexes: a sharp wave and a slow wave (characteristic of atypical absences).

The treatment of epilepsy must be complex, regular and prolonged. The multimodality treatment should include anticonvulsant dehydration, resolving and general health improving therapy. Prior to the beginning of the treatment it is necessary to specify the etiology of epilepsy and the type of seizures. If possible, the treatment should be provided with one optimally chosen drug preparation, whose dose would be gradually increased up to the absolute discontinuation of the seizures or to the appearance of any side effect of the drug. Two or more drugs are administered only in case of an insufficient efficacy of the monotherapy owing to an improper choice of drugs, their extremely low doses or an irregular taking.

When treating epilepsy, it is important to reveal the factors contributing to the appearance of seizures, to timely make necessary corrections in the course of the treatment, for instance if any concomitant diseases develop. It is necessary to regulate

the way of life, establish a regular regimen of sleep and wakening, avoid any psychoemotional overstrains, limit the patients' watching TV programmes and working in front of a computer monitor. It is important to exercise self-control over taking antiepileptic drugs. Epileptics should follow a milk-vegetable diet, restrict the intake of liquids, salty and spicy foods, meat; the use of strong tea and coffee should be reduced and alcoholic drinks absolutely excluded. In order to treat mental disorders in epilepsy, neuroleptics, tranquillizers and antidepressants are administered.

Antiepileptic drugs

Active substances	Dosages
Acidum alproicum	500-3000 (1000) mg per day
Carbamazepinum	400-2000 (600-800) mg per day
Phenobarbitalum (zobarbitalum)	60-240 (120) mg per day
Phenytoinum	100-700 (300) mg per day
Lamotriginum	100-800 (200-400) mg per day
Topiramatum	100-1000 (200-400) mg per day
Clonazepamum	2-8 (2-4) mg per day
Gabapentinum	1200-4800 (2400) mg per day
Pregabalinum	150-600 (300-450) mg per day
Leetiracetamum	1000-4000 (2000-3000) mg per day
Oxcarbazepinum	300-2400 (900-1200) mg per day
Lacosamidum	100-400 (200-300) mg per day

The epileptic status should be controlled, if possible, under in-patient conditions. At first, Diazepam (Sibazon, Lorazepam) is administered IV slowly by 10-20 mg of 0.5 % solution in 20 ml of 40 % glucose. If there is no effect, the administration of Diazepam is repeated 1.5-2 hours later. If the status is not controlled, a slow IV infusion of 40 ml of 2.5 % solution hexenal or sodium thiopental is made (1 g is diluted in 40 ml of NaCl isotonic solution) at a rate of 1 ml per 10 kg of the patient's

body weight. Simultaneously, 5 ml of 10 % solution of sodium thiopental or hexenal are injected IM.

Simultaneously with antispasmodic drugs, a lytic mixture is administered: 2 % trimeperidine hydrochloride – 1 ml, 25 % analginum – 2 ml, 1 % diphenylhydramine hydrochloride – 2 ml, 0.5 % novocaine – 2 ml IM.

With the purpose of dehydration, the following drug preparations are administered: 2 % furosemid (Lasix) – 2 ml IM; mannitol with urea by 0.5 g/kg of the patient's body weight in 140 ml of 10 % glucose IV by drops at a rate of 40 drops per minute; ethacrynic acid (Uregit) – 50 mg IV; prednisolone – 1-2 ml IM; Contrical or Trasylol by 10,000-30,000 units in 500 ml of NaCl isotonic solution IV by drops during 4 hours.

With therapeutic and diagnostic purposes, a spinal puncture is made. In order to improve the cardiac activity, 1 ml of 0.06 % corglycon or 0.5-1.0 ml of 0.025 % digoxin IV are slowly administered.

If blood pressure increases, papaverine by 1-2 mg/kg of the body weight, 25 % magnesium sulphate by 10 mg IV + 5 ml of dibazole IV, 5 % pentamine (0.5-1.0 mg) in 20 ml of 40 % glucose IV are slowly administered.

Drugs for treatment of mental disorders in patients with epilepsy

Active substances	Dosages
Neuroleptics	
Olanzapinum*	5-25 mg per day
Risperidonum*	0,5-6 mg per day
Quetiapinum*	500-600 mg per day
Amisulpridum*	50-800 mg per day
Antidepressants	
Sertralinum*	25-100 mg per day
Citalopramum*	10-40 mg per day
Paroxetinum*	10-30 mg per day
Escitalopramum*	5-20 mg per day

Venlafaxinum*	75-225 mg per day
Hypnotic drags	
Zopiclonum	3,75-15 mg per day
Zolpidemum	5-10 mg per day
Zaleplonum	5-10 mg per day

MENTAL AND BEHAVIORAL DISORDERS VILE ALCOHOL ABUSE. MENTAL AND BEHAVIORAL DISORDERS VILE NARCOTICS AND SABSTANCES THAT ARE NOT INCLUDED IN THE STATE LIST OF NARCOTICS ABUSE. NON-CEMICAL ADDICTIONS

Mental and behavioral disorders vile alcohol abuse.

Alcohol - the most commonly used psychoactive substance.

Alcoholism - a chronic mental illness caused by alcohol abuse, characterized by a pathological attraction to alcohol and the emergence of physical and mental disorders.

According to WHO, in the world are 120 million patients with alcohol dependence and alcoholism prevalence of 2%. In recent years there has been a clear trend of alcohol abuse and alcoholism growth in many industrialized countries, where the number of alcoholics is 7-10% of the population. The problem of alcoholism is one of the major in the world.

Alcoholic drinks have a bipolar effect: causing euphoria and relieve emotional stress. Repeated intake of alcohol is fixed conditioned reflex desire to remove them emotional stress, and the reception of alcoholic beverages becomes a habit. This is facilitated also the fact that the gravity of the conflict that caused the stress is removed, not only for the duration of alcohol, but also for a certain period of time thereafter. In addition, alcohol is a "social catalyst" that facilitates interpersonal communication.

The degree of alcoholization of society depends on economic and social relations in it. Socio-psychological function of alcohol is reduced to improve the illusory satisfaction of personal needs.

The highest peak of drinking between the ages of 20-40 years.

Classification of alcoholic mental disorders

- I. Acute alcoholic intoxication
 - 1. Simple alcoholic intoxication
 - 2. Pathologic intoxication
- II. Habitual alcoholism
- III. Chronic alcoholism
- IV. Metalcoholic psychoses

Acute alcoholic intoxication is a symptom complex of mental, autonomic and neurological disorders caused by the effect of liquor. The latter easily passes through biological membranes mixing with water and easily dissolving in fatty solutions. Its

absorption into the blood begins as early as in the oral cavity, it is even more rapid in the stomach and intestines; with the blood, liquor spreads all over the organism.

Simple alcoholic intoxication is the most common kind of acute alcoholic intoxication. Here the degree of expressiveness and the forms of mental, neurological and autonomic disorders depend upon the amount of spirits taken, sex, age, somatic state, mental peculiarities of the personality, its emotional state, the strength of the drink and the form of its taking.

There are three degrees of severity of alcoholic intoxication: mild, moderate and severe.

The mild degree of simple alcoholic intoxication develops if the alcohol concentration in the blood is within 20-100 mM/l (20-100 mg of alcohol per 100 ml of blood) and is characterized by a reduced active inhibition. Feelings of mental and physical comfort appear. The mood rises, people develop a desire to talk much, they feel cheerfulness and a surge of energy, their social contacts become easier. In this state, shy and unsociable persons would easier start conversations with strangers, joke, laugh. Troubles are endured easier and calmer. Subjectively a person in the state of mild intoxication feels some rise in his capacity for work, but this feeling is delusive, as the attention is not concentrated, it is easily distracted, the rate of thinking accelerates, but the associations are superficial. The scope and quality of the work done decrease, the number of mistakes increases, the critical assessment of one's own state being significantly reduced.

The moderate degree of simple alcoholic intoxication develops if the alcohol concentration in the blood is within 100-250 mM/l and is characterized by a reduction in the process of excitement. The mood changes: the person develops excessive touchiness, short temper, dissatisfaction with what is taking place, all these things determining the drunkard's statements and acts. His ability to correctly assess what is taking place decreases, and it often results in improper, sometimes illegal actions. The process of thinking becomes slower, the statements are trivial, the speech is slurred with perseverations, the drunkard feels it difficult to choose words and develops dysarthria. The threshold of acoustic perception elevates, therefore the speech becomes loud. It is difficult to switch attention to other things, the handwriting is roughly affected, ataxy develops, the movements become uncoordinated, the sensitivity to pain and temperature weakens. Hyperemia of the face gives place to cyanosis and paleness. Some people develop nausea and vomiting. The moderate degree ends with profound sleep followed by asthenia.

The severe degree of simple alcoholic intoxication develops if the alcohol concentration in the blood is within 250-400 mM/l. It manifests itself by disturbance of

consciousness from torpor, somnolence to coma. Expressed neurological disturbances, ataxia, muscular atony, dysarthria and amimia are present. Vestibular disturbances (nausea, vomiting, dizziness, a feeling of tinnitus) develop. The acuity of vision decreases, the orientation in the place is affected. Patients suffer from psychosensory disorders and illusions. The cardiac activity becomes weaker, the blood pressure and body temperature fall. Any interest to one's associates is lost. The intoxicated person looks sleepy and soon falls asleep with narcotic sleep, sometimes in awkward positions and improper places. If the blood concentration of alcohol approaches 700 mM/l such people may die because of respiratory paralysis.

Treatment of acute alcohol intoxication:

Medical treatment for alcohol poisoning: gastric lavage, administration n / a 0.25-0.5 ml of apomorphine hydrochloride to induce vomiting, bladder catheterization in the case of urinary retention. In comatose - administering cardiac drugs, in / 100 mg pyridoxine (vitamin B6), and 1000 ml of saline with 40% glucose. With strong motor excitation recommended vitamin B12 50-100 mg, barbiturates are contraindicated.

In cases of severe coma - venipuncture with the withdrawal of up to 200 ml of blood, c / saline - 800-1000 ml. Asphyxia - oxygen inhalation artificial respiration tsititon (1 ml solution of 0.15% w / w), lobeline (n / k 1 ml of 1% solution), inhalation of a mixture of 90% oxygen and 10% carbon dioxide. Recommended general and local warming. When mild to moderate intoxication - inside the 10 to 15 drops of ammonia per 100 ml of water.

Pathological intoxication

Pathological intoxication is acute psychotic states occurring after administration of different doses of alcohol, often small and is a kind of idiosyncratic habits.

Suddenly developing a twilight state of consciousness, it becomes disturbing drunk suddenly confused, completely disoriented in the environment, the patient experiences manifest themselves in scanty remarks and behavior, while retaining the ability to do quite complex actions. Under the influence of painful experiences (hallucinations, delusions), the patient often makes aggressive actions aimed at accident bystanders.

Ends pathological intoxication suddenly, often goes to sleep. In the subsequent complete or partial amnesia.

Habitual drinking - a habit that can go into alcoholism. The main indicator of domestic drinking - frequency and quantity of alcohol consumption as a means of resolving the psychological, social and biological problems. This form of alcohol abuse

and consider how prenosological. Stage of alcoholism, but not all alcoholics develop alcohol dependence. Nevertheless, alcohol abuse increases the risk of alcoholism.

Chronic alcoholism. Alcohol needs of developing different people at the same pace, it depends on the characteristics of the individual, his moral and ethical attitudes, customs micro social environment, preferably this method of relaxation in front of others.

Deepening of the main symptoms that characterize the habitual drinking leads to alcoholism. Patients with signs of alcoholism are formed Abuse Syndrome, of which common to all forms of the disease are pathological desire for alcoholic beverages, alcohol withdrawal syndrome and alcohol degradation of the individual.

The pathological craving for alcohol

Pathological desire to alcohol displaces other interests and motives, it can not be suppressed by the patient and drunkenness becomes an end in itself, and the quantitative and lost situational control of the intake of alcohol. Patients drink alcohol, regardless of the circumstances (working hours, the possibility of sanctions, the wrong place, etc.) and usually at doses causing intoxication, because they have no sense of alcohol saturation occurs.

Alcohol withdrawal syndrome - a complex of autonomous, somatic-neurological and psychiatric disorders that occur in patients with alcoholism during abstinence from alcohol after a prolonged and massive drinking. Clinic of alcohol withdrawal syndrome consists of post intoxication symptoms and symptoms characteristic of alcoholism.

Among the post intoxication disorders are most frequent such as: headache, dizziness, weakness, fatigue, excessive thirst, dry mouth, loss of appetite, diarrhea, increased blood pressure, unpleasant sensations in the heart, stomach, bad mood, working capacity decrease. These violations occur not only in patients with alcoholism, but every abusing alcohol in the post intoxication period. Patients with alcoholism symptoms described are usually combined with restlessness, dysphoria, irritability, a strong desire to get drunk. In a state of alcohol withdrawal present signs of chronic intoxication of CNS: disturbed sleep with vivid, unpleasant dreams, hyperacusia, hypnagogic, and sometimes separate the true auditory and visual hallucinations, ideas of reference, guilt, self-abasement, a large sprawling hand tremor, the language, the whole body sweating, tachycardia, nystagmus, some patients - seizures.

Abstinence syndrome in alcoholism occurs after 6-48 hours after the last use of alcohol and lasts from 2-3 days to 2-3 weeks. As a result of the above changes occur disturbances in the vital organs and systems, which can cause death.

Features of alcoholic mental degradation

Changing personality in alcoholism is determined by the stage of disease.

In the early stages usually sharpening premorbid personality traits, the most common are their types.

The moral and ethical decline is due to emotional and psychopathic disorders. Emotional disturbances are expressed in mood lability, touchiness, pessimism with an artistic demonstration of their feelings, irritability, outbursts of anger and irritation. There is an emotional brutalization, reducing criticism. Alcoholics careless, underestimated the difficulties tend to be flat humor. They have a sense of distance disappears, understanding of behavior in different situations. Some develop short-term periods of depression.

In the structure of the individual degradation in alcoholism moral and ethical decline occurs early and is compounded as the disease progresses. In the circle of companions alcoholics cheerful, carefree, boastful, do not hesitate to talk about intimate aspects of their lives and the lives of loved ones, laugh diseases and misfortunes of his family members. They are false, cynical, inclined to the flat monotonous jokes. Houses take extra rude and irresistible alcoholics, they are aggressive toward their parents, wives, children, exposing them sometimes sophisticated torture.

Alcoholics carry out their professional responsibilities superficially, trying to evade them, but at the same time receive a financial reward. Fading interest in creativity, reduced self-esteem. Many of them lose their jobs, families, apartments, livelihoods and at the same time not blame yourself, and other people or negative circumstances.

On the remote stages of the disease are noticeable features of intellectual-mental decline, although pronounced dementia it comes not at all.

Stages of alcoholism

In clinical practice, step 3 is isolated in diagnosis of alcoholism: primary (I), medium (II) and the final (III).

The first (initial) stage of alcoholism

For this initial stage is characterized by an abnormal craving for alcohol, reducing the quantitative control, height tolerance, alcoholic amnesia. In half of cases of the I-st stage alcoholism formed in individuals younger than 25 years, in others - 25-35 years, and very rarely - an older age. The duration of 1 year to 6 years.

The pathological inclination to alcohol at this stage is shown in the most mild form usually in situations where traditionally occur booze.

Tolerance to alcohol increases 2-3 times, disappears gag reflex overdose, there is a transition from weaker to stronger drinks. Withdrawal phenomena are absent. The negative social consequences of increasingly limited family quarrels, slowdown in promotion at work.

The second stage of alcoholism.

Its main diagnostic feature - abstinence syndrome. In addition, all exacerbated by the symptoms characteristic of the I stage. II stage of alcoholism is formed in 25-35 years, its duration in 2/3 patients less than 10 years, 1/3 - 10-15 years.

The primary pathological attraction to alcohol is often at this stage arises spontaneously.

Quantitative control is lost, the individual receiving the usual dose leads to an irresistible attraction to continue to drink.

Tolerance to alcohol reaches a maximum, and for several years remains constant, exceeding the initial 5-6 times. High doses are used either simultaneously or fractional throughout the day.

Sharpens the premorbid personality traits. There are features of alcohol degradation (coarsening of emotions, anxiety, insufficiently critical attitude towards themselves). The social consequences in the II stage of alcoholism vary from subtle to deep, characterized by severe maladjustment. Half of the patients will not be saved marriages, they often lose their previous qualifications.

The third stage of alcoholism

Craving for alcohol in this phase takes on the character invincible, it arises spontaneously. This attraction reminiscent of hunger or thirst. Loss of control is accompanied by a quantitative loss of situational control. Any, the smallest dose of alcohol causes an irresistible craving for alcohol with the desire to get it at any cost, even by illegal means. Patients consume alcohol alone or in the company of random individuals, often in inappropriate places. There is a lower tolerance to alcohol.

In the III stage of alcoholism are formed rough, often irreversible pathological changes in the body.

Somatic and neurological disorders in alcoholism

Epidemiological studies found that the diseases of internal organs occurs in one in four of the alcoholic and the overall incidence of people who abuse alcohol is twice higher than that of those who drink rarely and little. The most characteristic of alcoholism is a fatty liver and polyneuropathy. However, there is no one system of the body, that would not be violated under the influence of alcohol. Somatic symptoms of alcoholism and the neurological occur at different stages of disease.

Dipsomania

Dipsomania (true drinking bout) - periodic (in the form of hard drinking) alcohol abuse in patients who are not suffering from alcoholism. Zapoju precedes anxious - depressed mood, sleep disturbance, anorexia, headache. Binge duration from a few days to a week. Ending his sudden, it disappears when the need for alcohol and even appear aversion to it.

Features of alcoholism in women.

In recent years, a trend towards an increase in the incidence of alcohol abuse among women.

The most significant determinant of women's alcoholism is a family history of alcoholism and other mental illnesses. These figures are significantly higher than in the group of male alcoholics.

Women from the beginning try to hide their drinking, they prefer to drink either in private or in isolation, without attracting attention. They are faster than males appears alcohol dependence, abuse from the beginning until the withdrawal are 3-5 years old, quickly lost quantitative control. Daily doses range from 350-500 ml 500-700 ml of wine or to 1-1.5 and even 2 l of strong alcoholic drinks.

Women have shorter stages of alcoholism, and mental and physical disorders and the greater is faster than that of men, there is no well-defined disease phases and one phase as it overrides another. Women have formed early in the withdrawal syndrome and severity of mental disorders when it is greater than the vegetative.

Signs of degradation occur in women earlier than men, which is more profound than that of men: disappear the higher moral and aesthetic emotions, these women leave work, family, do not care about the children and elderly parents, are immoral lifestyle, promiscuous dating institution, in sexual relations. They rarely agree to be treated for

alcoholism and is usually not configured to complete discontinuation of alcoholic beverages. Somatic disorders in alcoholism in women occur more frequently than men, they have 2 times more likely to cirrhosis of the liver, hepatitis, neuritis, alcoholic pellagra. Infertility is often observed, stillbirth, birth of children with disabilities.

Features of teenagers' alcoholism.

Alcoholism can be formed in adolescence (14-18 years) or adolescence (18-20 years).

Clinical manifestations, course and outcomes of early alcoholism different malignancy.

In adolescents and young adults increased sensitivity to alcohol, they get drunk on smaller doses than adults, they have more pronounced euphoria, accompanied by unfocused hyperactivity decreases rapidly control the dose of alcohol, as well as social control, they use mainly fortified wines.

The main features of alcoholism in teenagers and young adults - a rapid development of the disease, the lack of severity of symptoms, the difficulty in distinguishing the stage of disease, the rapid development of the degradation of the individual, leading to social exclusion of patients.

In adolescence, dependence on alcoholic beverages is formed by 2-4 years.

The pathological attraction to alcohol occurs in 1-1.5 years from the beginning of the abuse.

Craving for alcohol is formed faster than in the past initiated its use, often teenagers do not realize occurs attraction. On an unconscious attraction proves liveliness of the sick at the mention of drinking, they were willing to report various details of drinking, are more active in seeking to obtain alcohol. The younger the patient, the earlier attraction becomes irresistible, and occasional drunkenness quickly becomes a regular. Step domestic drinking for many is virtually absent.

The main feature of the first stage of alcoholism in teenagers is the formation of individual psychological dependence. Drink becomes important in the life of a teenager, he had other interests disappear. Teens throw study, do not hesitate to appear drunk in public places, can produce alcohol illegally. They drink a few times a week, regardless of whether the company has companions. Alcohol becomes the means necessary to maintain optimum health.

Rapidly growing tolerance to alcohol, disappears protective gag reflex overdose weaker drinks are replaced by more robust.

Adolescents in the 1st stage of alcoholism are often observed symptoms that are usually characteristic of the 2nd stage in adult patients: palimpsests, change the picture of intoxication, expressed somatic disorders.

Withdrawal symptoms manifest vegetative symptoms with asthenia, fatigue, headache, dyspepsia, anorexia, insomnia. Mental symptoms of withdrawal are less pronounced. Often there are subdepressive states. Neurological symptoms including tremor, no. withdrawal phenomena last from several hours to 3-5 days, but in the subsequent 2 months retained a strong craving for alcohol, which subordinates the behavior of patients.

They rather quickly formed and the degradation of the individual gross social exclusion. Teens usually leave school, spend time in anti-social companies, they are easy to draw a variety of criminal acts, many commit suicide. In adolescence and early alcohol abuse prevalent defeat emotional and volitional.

The etiology and pathogenesis of alcoholism

It is well known that the main reason alkogolizma- alcohol abuse, but even the regular use of alcohol does not always lead to alcoholism and, in some cases after the first of drinking alcohol dependency arises. It can therefore be considered justified statement that alcoholism is a multifactorial disease and polyetiological.

Along with the specific influence of alcohol in the etiology of alcoholism are important social, psychological and biological factors alone.

Social factors predisposing to the development of disease - is drinking customs, public attitudes towards alcohol consumption, social status, economic security, education, marital status, ethnicity, and religious affiliation.

The role of psychological factors is confirmed by the high frequency of alcoholism in psychopathic personalities that differ insufficient adaptation to the social environment, they are primitive, insecure, dependent and addicted to negative leaders.

Individually-biological factors of alcoholism is primarily determined by heredity. Scientific evidence indicates that the risk of alcoholism in first-degree relatives in the 7-15 times higher than in the population, the risk of getting in identical twins is 2-2.5 times higher than fraternal. The role of heredity can be carried out directly via the particular enzyme system responsible for the metabolism of alcohol in the body, and through the inherited personality traits that predispose to alcohol.

Among the biological factors play an important role alcoholism residual effects of organic lesions of the central nervous system, delays and deviations in somatic and

sexual development, chronic and acute diseases which provoking asthenia, neuroticism and neuropathy in childhood and early introduction to low-grade distilled spirits.

The pathogenesis of alcoholism is complex, the most important in recent years, given the impact of acute and chronic alcoholic intoxication on the function of neurochemical systems in the brain - the dopaminergic, serotonergic and GABAergic. It is believed that alcohol affects all (or many) neurotransmitter system of the brain. The mechanism of addiction alcoholism has a lot to do with drug addiction - is the effect on catecholamine (dopamine) mediation. Alcohol enhances the release of neurotransmitters from the depot, which leads to the depletion of stocks and the deterioration of health, and this causes the desire for a new reception of alcohol. The connection between the exchange and catecholamines endorphins indicates an important role in the formation of alcohol dependence endogenous morphines.

The mechanism of toxic effect of alcohol to the central nervous system can be explained by the fact that it is a membrane-lipophilic substance.

The role of liver enzyme alcohol dehydrogenase (ALDH), which promotes the oxidation of alcohol. The disadvantage of this enzyme that develops in alcoholics due coarse human liver, leads to the accumulation of acetaldehyde in blood which has a toxic effect on the brain.

Treatment of alcoholism

Given that alcoholism is a disease polyethiological, which are involved in the pathogenesis of many factors, treatment of these patients should be long-term and continuous, the most differentiated, complex, begin at the early stages of alcoholism.

Treatment of alcoholism is conducted in several stages:

Step I - the treatment of acute and subacute symptoms of the illness resulting from alcohol intoxication (binge interruption, arresting abstinence).

Step II - reconstructive therapy aimed at normalizing somatic and neurological functions, as well as the fight against addiction to alcohol.

Step III - rehabilitation of patients, stabilizing therapy aimed at maintaining remission and preventing relapse.

The first stage of treatment must be preceded by a full open alcohol intake, as a gradual reduction in dose for the patient goes harder.

In order to develop a strong aversion to alcohol apply conditional reflex, sensitizing therapy and psychotherapy.

Negative (vomit) reaction to the sight, smell and taste of alcohol produced in the process of conditioned reflex therapy. As reinforcing agents use different emetics. Most often used for this purpose apomorphine, as well as other emetics: emetine, thyme.

The fight against the craving for alcohol is carried out with the help of sensitizing therapy, the essence of which is to provide a chemical barrier, making it physically impossible alcohol intake. Sensitization habits caused by taking antabuse (teturam, disulfiram, esperal), metronidazole (Flagyl, Trichopolium) furadonine, furazolidone.

Prophylactics of alcoholism

A primary prophylactic of alcoholism requires a combination of administrative, legal and health and hygiene measures. Activities of administrative and legislative measures - is the administrative, legal and educational measures aimed at strengthening the fight against alcohol. Medical and preventive measures - it is carrying out extensive explanatory work among the population through the mass media. It is necessary to fight with tradition, starting from childhood.

Secondary prophylactics - is the early recognition and early treatment of alcoholism, it is necessary to recognize and overcome opposition to the treatment of patients.

Tertiary prophylactics - is the delay of coarse, irreversible violations in alcoholism.

Mental and behavioral disorders vile narcotics abuse.

Addiction (Narcomania) - diseases caused by the use of substances included in the state list of drugs that manifest mental and sometimes physical dependence on these substances, tolerance to them and expressed medical and social adverse effects.

In Ukrainian Narcology, drugs are the substances which are included in the official list of drugs approved by the Minister of Health, and the abuse of substances not listed in the drug list, defined as abuse. From a clinical and medical sides of the approach to patients with drug and substance abuse, as well as the principles of their treatment are identical. The differences are determined by a legal criterion which is absent in substance abuse, as a manufacture, sale, storage, transportation of these substances are not regarded as criminal acts.

According to the World Health Organization (WHO) "anesthesia" of the world population continues to grow, according to official data in the world, there are over 1

billion people who use psychoactive substances, among them - 50 million addicts,. According to the WHO European Office for Europe nearly 16 million drug addicts.

The clinical manifestations and course of drug addiction

Acute intoxication with the drug

Narcotic "intoxication" is characterized by a subjectively positive for the human feelings: improving mood, it becomes a peaceful, complacent with no real improvement in the situation. Problems at the time dezaktualiziruyutsya, but not eliminated. Such a pleasant subjective effects the drug has only at the beginning of the disease, and subsequently received only a drug to prevent withdrawal, restore and improve efficiency.

Each drug is characteristic of his state of intoxication, which is often accompanied by a disturbance of consciousness, thinking and perception.

The first use of a drug sometimes cause the protective reaction of the organism in the form of itching, nausea, vomiting, dizziness, profuse perspiration, which disappear on subsequent receptions.

Acute drug intoxication depends on the mode of administration of the drug, external interference, physical and mental condition to take the drug.

Drug abuse without dependence on them is not an addiction and domestic Addiction is defined as the addictive behavior - is the abuse of various substances that change the mental state before formed a dependency on them.

The clinical picture of narcomaniae is mostly represented by three basic syndromes: mental dependence, physical dependence and tolerance for a narcotic.

Mental dependence is characterized by a pathological striving for taking a narcotic constantly or periodically. It develops in all cases of a systematic taking of narcotics, but sometimes it may appear as early as after the first dose of a narcotic. The patient strives for taking a narcotic in order to have pleasant feelings or eliminate phenomena of some discomfort. The drive for a narcotic may be obsessive or compulsive. In the obsessive drive, the patient constantly has thoughts about a narcotic accompanied by animation, high spirits with eager anticipation of its taking, or depression and dissatisfaction when it is not available. The compulsive drive is characterized by an irresistible striving for a narcotic, it determines the patient's behaviour and motives of his actions with an absolute absence of criticism. This drive may develop in abstinence or at the height of intoxication, in the latter case there may be overdosage of a narcotic.

Physical dependence is the state of reconstruction of all functions of the organism in response to a chronic use of narcotics manifested by severe mental and somatic disorders after discontinuation of the effect of a narcotic. The resultant abstinence syndrome is alleviated or absolutely controlled by next taking of a narcotic. Clinical manifestations, terms of formation and duration of the abstinence are different in different kinds of narcomaniae. It should be noticed that physical dependence develops in cases of a chronic use of many, but not all the narcotics.

Tolerance is the state of adaptation to narcotics manifesting itself by a constant reduction of a response to taking its usual doses. In the process of the development of the illness there is an increase of tolerance when the addict's organism can tolerate doses of a narcotic several times exceeding therapeutic and even lethal ones. The increase of the tolerance results in higher doses and rates of taking narcotics. At a certain stage of the disease the tolerance reaches to its maximum and remains constant for a long period of time. Later there is a reduction of the tolerance, and taking of usual doses causes overdose, often with the lethal outcome.

In the course of narcomaniae, 3 stages are distinguished. In the beginning, there is an episodic taking of narcotics, when there is no definite rhythm of narcotization and a change of the tolerance yet.

Stage I (the initial stage) – formation of mental dependence, narcotics are already taken regularly, and tolerance for them increases.

Stage II (the developed stage) is characterized by a further rise of the tolerance up to its maximum, the character of the narcotic inebriation changes, and physical dependence appears.

Stage III (the terminal stage): the tolerance falls, positive feelings after taking a narcotic absolutely disappear, severe somatoneurological disorders develop.

Classification of narcomaniae

- I. Opiumism
- II. Cannabism
- III. Barbiturism
- IV. Narcomania caused by abuse of psychostimulants:
 1. amphetamine narcomania;
 2. abuse of hand-made drugs, preparations of ephedrine and ephedrine-containing mixtures;
 3. cocainism
- V. Narcomania caused by abuse of hallucinogens:

1. mescaline and psilocybin;
 2. LSD;
 3. phencyclidine
- VI. Synthetic drugs (“designer drugs”)
- VII. Polynarcomaniae, complicated narcomaniae

Opiumism

Opiumism develops in cases of abuse of opiates – narcotic analgetics obtained from the opium poppy (*Papaver somniferum*), as well as by a synthetic way. Opiates include: a) natural preparations (raw opium, milk of the opium poppy, poppy straw, pure opium alkaloids: morphine, codeine); b) synthetic preparations (promedol, methadone, lidol); c) semisynthetic preparations (heroin). Narcotic “inebriation” develops even after taking small doses of opiates. The patient feels some specific bliss and joy, his thoughts flow rapidly, all the problems go to the background.

Overdosage of opiates is a state which is dangerous for life and accompanied by slow respiration, hypothermia, hypotension, bradycardia, pupillary constriction. The death usually results from respiratory arrest. A triad of the signs (a coma, the pupils in the form of a pinhead, difficult respiration) testifies to an overdosage of opiates and requires urgent medical aid (an injection of opioid antagonists, particularly naloxone or nalorphine).

Stage I of the narcotic disease is characterized by appearance of mental dependence, a regular taking of a narcotic, an increasing tolerance. The latter rises 2-6 weeks after the beginning of a systematic use of a narcotic. In case of an absence of the narcotic, the patients’ spirits become lower and their mental state worsens.

Stage II of the disease develops 3-8 weeks after the beginning of a systematic use of a narcotic. Tolerance sharply increases and achieves high values. Thus, the patient may take doses of opiates exceeding therapeutic ones 200-300 times. Stage II is characterized by the abstinence syndrome which develops within a few hours after the last use of a narcotic and reaches to its maximum after 1.5-3 days, its most acute symptoms persist up to 10 days, and residual ones even longer. Six-eight hours after the last use of a narcotic, the patient develops short temper, anxiety, dysphoria, general malaise, weakness, yawning, lacrimation, rhinitis, sneezing, itching in the nose and nasopharynx, a sensation that the nose is stuffed, the intestinal peristalsis is increased. There is mydriasis, tachycardia, tremor, anorexia, an aversion to a tobacco smoke, a sleep disturbance. Later the patient feels chill, hyperhidrosis, unpleasant painful sensations in the muscles, the body is covered with “gooseflesh”, severe pains in the muscles of the arms, legs, back, which are extremely excruciating for the patient.

At stage III, the euphoric effect of a narcotic disappears and it is injected only to maintain the capacity for work and the mood. Tolerance for a narcotic decreases. In the state of abstinence the patients feel muscular discomfort, disturbances in the cardiovascular.

A systematic use of opiates results in severe somatic and mental disorders. The patients look older of their age, their skin is pale, dry and icteric, the face is wrinkled, the hair and nails are thin and fragile, the patients are exhausted, they early grow bald and often loose all the teeth. The veins are thickened, resemble plaits, have numerous scars, sometimes they are absolutely obliterated; phlebitides are very common. Pulmonary emphysema develops; pneumoniae, hepatitides, glomerulonephritides and polyneuritides frequently occur. Mental disorders at the initial stages manifest themselves by asthenic symptoms, in the late stage of the illness the patients become disabled because of severe asthenia and anergy.

Many patients (oftener those who use heroin) form signs of an intellectual-mnemonic defect, lack of criticism, torpidity of thinking, diminished attention, superficial statements, memory disturbances. Their interests are concentrated only on the ways of getting a narcotic, they are untruthful and shameless, do not worry about loss of their job, family and their own health.

The prognosis of opiumism is unfavourable, the recovery is very seldom and remission may be achieved only in 1/5 of the cases.

Cannabism

Abuse of hemp preparations is the most wide-spread form of narcomania in the world; they are used by more than 200 million people of the Earth. The narcotic effect is produced by psychoactive substances which the hemp (Cannabis) contains – cannabinoids; the most active of them is trans- Δ^9 -tetrahydrocannabinol (THC), the Indian hemp (Cannabis indica) being especially rich in it.

Cannabinoids are used with food and drinks, but more often inhaled when smoking. Marihuana is mixed with tobacco and cigarettes are rolled; they are longer than common ones and burnt out slantwise (in the narcomaniacs' slang, they are called "joints", "rockets"). The use of marihuana often begins as early in the older forms of school.

According to literature data, the majority of the people who tried and use hemp preparations live in the USA, Australia, Canada, Norway. In the countries of the Commonwealth of Independent States about 2/3 of narcomaniacs join narcotics through the hemp.

The first 5-10 minutes after a use of a narcotic may develop some fear, anxiety followed by euphoria with an ardent desire to run, dance, jump, a feeling of warmth in the whole body, some particular lightness, as if the feeling of one's own weight were lost ("weightlessness"). An inadequate gaiety is accompanied by loud laugh in connection with an insignificant thing.

If a narcotic is used by a group, then usually the laugh "catches" the whole company because of increased suggestibility. By the same mechanism, the group may feel fear, anxiety, horror. Many people develop psychosensory disorders with phenomena of derealization and depersonalization. It is not in rare cases that macropsiae appear, the perception of the shape of objects is distorted. The patients' orientation in time and space is affected: at one moment the course of time accelerates, at another it decelerates; a distance between objects as well as between those people who have used a narcotic and others seems tremendous; it seems to them that the hand will never reach to a glass, steps of a staircase "stretch up to the sky". Self-consciousness is disturbed, there is some split personality, when on the one hand the one's own "self" is perceived, but nearby there is another person who controls the acts, made by the first one, and mocks at him. Drives are sharply disinhibited, appetite increases, hypersexuality and aggressiveness appear.

The state of intoxication is accompanied by autonomic disturbances: hyperaemia, a pale nasolabial triangle, tachycardia, dryness, dilatation of the pupils. The intoxication lasts from 30 minutes to 2-4 hours after marihuana and up to 5-12 hours after hashish.

Stage I of narcomania is characterized by appearance of mental dependence; the narcotic is now smoked by the patient alone 2-3 times a day, he is preoccupied only by thoughts how to get next dose. Within breaks in the use of the narcotic the patient suffers from listlessness, sleepiness, low spirits, headache, unpleasant sensations in the heart region, short temper.

Stage II of narcomania develops after 2-3 years of a regular smoking of hashish. The abstinence syndrome develops: malaise, tiredness, jadedness, loss of appetite, tremor, sweatiness, palpitation, low spirits with short temper, irateness, maliciousness, anxiety, different cenesthopathies. The maximum development of abstinence is achieved by the 3rd-5th day, its duration averages up to 2 weeks.

During *stage III of narcomania*, which develops in chronic use of hashish, psychopathisation of the personality begins (listless, passive, inert, sullen, reserved, memory and attention are reduced disrupted behavior). In 15 % of cases there are chronic schizophrenia-like psychoses.

Narcomaniae caused by soporifics

Abuse of soporifics, included into the list of narcotics, belongs to narcomaniae, while abuse of other soporifics is regarded as toxicomaniae. Narcotics are derivatives of barbituric acid: Barbital (Veronal), Phenobarbital, Nembutal, as well as Noxyron from soporifics of the nonbarbituric line. Abuse of soporifics may be in those patients who take them for sleep disturbances or to feel euphoria. The patients abusing soporifics with the purpose of euphoria, usually inject them intravenously in the doses exceeding the therapeutic ones 2-3 times. Gradually the euphoric effect in the patients of this group decreases and they develop tolerance.

Narcomaniae caused by barbiturates

Acute intoxication with barbiturates resembles alcoholic one: inhibition, lack of coordination of movements, torpidity of thinking, hypomnesia, slow speech, disturbance of criticism, difficulties in concentration of attention, emotional lability, disinhibition of sexual and aggressive impulses, sharpened personality peculiarities, nystagmus, diplopia, ataxia, hypotonia, uneven reflexes. The patients' blood reveals barbiturates.

A chronic intoxication with barbiturates rather rapidly, within 4-5 years, results in rough disorders of the personality, formation of the psychopathy-like organic defect. The patients' appearance is specific: their face is grey-greenish, with some thin greasy coating, paste-like and with deep mimic folds. The pupils are dilated, their reaction to light is reduced. The movements are not coordinated. The blood pressure is abnormal (higher in the state of abstinence and lower in intoxication). The tongue is covered with some thick dingy brown coat. Commonly, the following neurological disturbances are observed: small-swing tremor of the fingers of the stretched arms, unsteadiness on the legs in Romberg's posture, horizontal nystagmus, absence of convergence. Some patients develop polyneuritides, anaemia, agranulocytosis.

Narcomaniae caused by abuse of psychostimulants

Amphetamines, preparations of ephedrine and ephedrine-containing mixtures, cocaine and others psychostimulants produce an exciting effect on the CNS .

Amphetamines (amphetamine sulphate (Phenamine), dextroamphetamine (Dexedrine), methamphetamine (Methedrine), methylphenidate (Ritalin)) are taken orally and injected intravenously.

Acute intoxication: high spirits, physical cheerfulness, accelerated thinking, a higher urge to act and communicate, garrulity, hypomaniac syndrome.

A chronic use of amphetamines gives rise to dystrophia, avitaminosis, ulceration of skin integuments, sleep disturbance, rough autonomic disorders. Amphetamine narcomaniacs develop degradation of the personality.

In recent time young people, often juveniles, use for their entertainment such a drug as Ecstasy, which is 3,4-methylenedioxymethamphetamine (MDMA). As a rule, Ecstasy is used in the form of pills at discotheques and dance parties in order to raise activity. Taking a pill of Ecstasy gives rise to a feeling of general fraternity, intimacy, love for people, some particular bliss, delight for 20-30 minutes. Later, a stimulatory effect develops: a desire to move and dance, appearance of illusions, sexual excitement, a rapid flow of thoughts, "the brain is as if in some mist". The postintoxication period is characterized by listlessness, weakness, sleepiness, depression, difficult intellectual activity, pains in muscles. A regular use of Ecstasy results in a higher tolerance and a need to take the drug every day. The picture of inebriation changes, euphoria turns into some fear, shortness of temper; visual hallucinations and illusions, panic attacks, depressive and paranoid states have been also described. Taking of Ecstasy causes severe disorders in the liver and heart, hyperthermia with a subsequent heat stroke and lethal outcome.

Narcomaniae caused by hand-made preparations of ephedrine and ephedrine-containing mixtures (efedron and pervitin narcomaniae) are rather common. *Ephedrine*, an alkaloid contained in the ephedra grass (*Ephedra*), produces an exciting effect on the CNS. By a hand-made method and using potassium permanganate with acetic acid, narcomaniacs manufacture potent home-made psychostimulants Efedron and Pervitin from ephedrine and ephedrine-containing mixtures. Abuse of these drug preparations gives rise to the development of manganic encephalopathy.

Taking of Efedron develops euphoria with particular psychosensory disorders, the patients feel an unusual lightness in the body, a sensation of stirring hair on the head, a feeling of weightlessness. The surrounding objects seem richly and brightly coloured. Synaesthesiae develop: together with sounds, some iridescent spots appear in the eyes. The patients develop a feeling of their own kindness, love for people, an unusual clearness of thoughts, their mood becomes higher, they are garrulous not to the point. Their appetite and sleep disappear, urination is suppressed, tachycardia and dryness in the mouth develop. This state of intoxication lasts up to 6-8 hours.

In Pervitine inebriation, depersonalization disturbances are expressed to a larger extent. Taking of large doses of hand-made psychostimulants, 1/3 narcomaniacs in the state of intoxication develop intoxication psychoses in the form of acute or rudimentary paranoid with delusions of persecution and special meaning, verbal and visual hallucinations. The psychoses usually appear after many days of narcotization, when

doses of a drug reach to maximally tolerable values. In these cases, instead of euphoria, a usual injection of a drug gives rise to fear, anxiety, stress, a feeling of some oncoming danger. The patients develop auditory hallucinosis or the hallucinatory-paranoid syndrome with delusions of persecution, reference, affection, sometimes grandeur, accompanied by an expressed motor excitement.

An episodic abuse of Efedron lasts from 1-2 weeks to 6 months, usually 2-4 months. Mental dependence forms during 3-4 weeks. In Pervitin abuse, formation of mental dependence is much more rapid, within 3-4 days, and sometimes the stage of an episodic use of Pervitin is absent and even the first injection is followed by its regular use. Physical dependence forms after 6-12 weeks of a regular narcotization on Efedron and after 2-3 weeks on Pervitin. The abstinence syndrome develops 6-12 hours after Efedron intoxication and 18-20 hours after Pervitin one. The abstinence is characterized by three groups of disorders: sleep disturbances, affective disorders and asthenia.

An abuse of home-made psychostimulants causes rapid development of psychopathization of the personality, an expressed emotional roughness, reduction of the capacity for work, moral-ethic decrease, memory and intellect.

For many centuries there is a habit in a number of countries of East Africa and Arabian Peninsula to chew **kat leaves** (leaves of the kat shrub, *Catha edulis*) which contains several active substances, including amphetamine-like cation and less active katine, which is identical to appetite suppressing D-norpseudoephedrine, a component of many slimming remedies. Chewing kat leaves for many years causes mental dependence, a drive for kat may be overvalued-dominating (more frequently) and obsession-like. Abstinence develops in elderly patients who have been using kat for 15-20 years and is characterized by a slight expression of the following signs: myasthenia, cramps in the sural muscles, sleep disturbances, paresthesiae, decreased peristalsis, reduction of appetite and sexual drive.

Chronic kat intoxication goes through 3 stages.

The first stage: mental dependence, no abstinence, loss of the quantitative and situational control and a stable tolerance.

The second stage: the period of euphoria decreases, the tolerance has stabilization, abstinence develops, negative streaks of the character sharpen, signs of social degradation develop.

The third stage: presence the physical dependence, atypical forms of the inebriation, eliminate asthenia and anxiety, psychopathisation and social degradation, paranoid psychoses. The daily dose is reduced.

Cocainism

Cocainism has been known for a long period of time. Cocaine was extracted from leaves of the coca shrub (*Erythroxylum coca*) in 1860s and used for local anaesthesia.

Acute cocaine intoxication manifests itself by high spirits, a feeling of a fresh surge of energy, higher cheerfulness, a tendency towards overestimation of one's own significance and abilities, disinhibition, garrulity, hyperactivity, maniac syndrome. Overdosage of cocaine develops psychotic intoxication with fear, anxiety, confusion, as well as visual, auditory and tactile hallucinations, cocaine delirium, cocaine oneiroid, cocaine paranoid (persecution or jealousy).

Cocaine causes physical dependence which forms within 4 years in adults and after 1.5 years of abuse in juveniles. Cocainism results in a change in the personality, decrease of moral-ethic emotions, a sharply narrowed sphere of interests, defective memory and reduced intellect. Often the patients leave their job, do not care for their relatives, live a parasitic life. They are sharply exhausted because of a loss of appetite, their face is greyish and mucosae are dry. The intranasal use of cocaine may cause necrosis and perforation of the nasal septum, intravenous injections often give rise to abscesses. The sleep is roughly disturbed, it is accompanied by nightmares.

Narcomaniae caused by hallucinogens

This type of abuse is good known for many times. This group (the peyote cactus (*Lophophora williamsii*), mescaline, psilocybe (*Psilocybe mexicana*), LSD, dipropyltryptamine (DPT), phencyclidine, ketamine).

Hallucinogens cause disinhibition of the activity of the occipital areas of the brain and limbic structures by influencing the metabolism of catecholamines, dopamine, acetylcholine, serotonin and GABA. All hallucinogens produce an expressed sympathomimetic effect manifesting itself through tremor, tachycardia, hypertension, sweating, mydriasis, indistinct vision.

Abuse of LSD (lysergic acid diethylamine). LSD can be in the form of powder, solution, capsules or pills; the substance has no taste, smell or colour; it can be dissolved on a lump of sugar or a piece of blotting paper. Oftener it is taken orally, in isolated cases it is injected subcutaneously or intravenously, sometimes it is smoked in a mixture with tobacco.

LSD effect begins even after taking 20-35 mg, but usually the taken dose is much higher, 50-300 mg. LSD intoxication develops one hour after its taking and lasts up to 8-12 hours. Most frequently, visual hallucinations appear; at first in the form of

vague contours, geometrical figures, bright flashes of light. Later true visual hallucinations develop, rather often they are frightening. At the same time, auditory and tactile hallucinations are observed. The patients' mood changes from euphoria, ecstasy to anxiety, panic. Suggestibility and sensitivity to stimulants become higher, colours acquire an unusual saturation, perception of music and taste sharply become more sensitive. Typical are synaesthesiae, when sounds are perceived as coloured and colours sound. Perception of the time is affected, as if it became prolonged. Depersonalization, derealization and a disorder of the body scheme develop. LSD intoxication is accompanied by a sensation of the work of one's internal organs whose signals usually do not reach to consciousness. In the memory there is reanimation of events from the remote past, often early childhood. The depersonalization acquires peculiar forms: the patients have the feeling that their own "self" separates from the body, they also feel that they are going mad and will never be healthy again. Many people taking LSD develop a feeling of profound understanding of religious and philosophic ideas which was difficult for them before. After that they have a false idea about a higher creative potential of their own personality.

The hallucinations and other mental disorders affect the patients' behaviour. If criticism is preserved, they only passively contemplate everything occurring with them. If the intoxication is more profound, then criticism towards morbid feelings is absolutely absent and the patients may commit aggressive or autoaggressive acts. At the height of an expressed intoxication, psychotic states develop with the hallucinatory-paranoid or maniac-paranoid syndromes whose duration is insignificant (a few days), but a delirious interpretation of the hallucinations is preserved even after their disappearance. In the postintoxication state there is development of severe depression with agitation and suicidal tendencies, their duration being from 1 to 7 days.

The most typical complication in people taking LSD is a recurrence of mental disorders some time after using the drug. This is a so-called "bad excursion", "bad trip", which resembles an acute panic reaction to cannabis accompanied by psychotic symptoms. This state develops in 1/4 of the people using LSD and lasts 8-12 hours, sometimes even longer.

Another typical complication of the effect of hallucinogens is a spontaneous transitory drug-induced feeling which appears when the person did not take the drug before. In some cases the hallucinatory-paranoid or depressive (with hallucinations) syndromes develop, in others isolated fragments are reproduced in the form of elementary visual hallucinations or illusions. The American classification terms these disturbances as a "flash back", their duration is 24-48 hours, sometimes longer. Some LSD consumers develop mental dependence in the form of a strong drive for a repeated

use of the drug. Tolerance develops rapidly, but disappears rapidly too (within 2-3 days). Physical dependence in case of LSD use is absent. Also the literature does not have any clear data about significant personality changes or protracted psychoses.

Abuse of phencyclidine. Beginning from 1970s, phencyclidine was used as a “street drug”, which in the narcomaniacs’ slang is called “angel dust”, “angel hair”, “dust of angels”, “crystal”, “peace”, “supergrass”, “(super) cools”, “superjoint”, “supergrain”, “rocket fuel”. It is taken orally, intravenously, when smoking and in combination with other drugs. Most frequently it is injected into a marijuana cigarette or taken orally. The drug is easily absorbed by the blood and produces a sympathomimetic, cholinergic effect, it evokes a response of the serotonin system.

Psychotic manifestations develop even in a moderate intoxication. As a rule, these are cloudiness of consciousness with hallucinations, delusions or a maniac state with hyperactivity, accelerated thinking, tachylalia, far-reaching plans. Sometimes, during an acute psychotic episode the behaviour is seriously affected: the patients would tear clothes on themselves, masturbate, laugh or cry, they are untidy. These periods are usually forgotten. An acute psychotic episode lasts from 24 hours to 1 month. It is possible to observe a recurrence of the psychosis after discontinuation in using the drug, a so-called “flash back”.

Tolerance for phencyclidine increases slowly, its regular use may develop mental dependence. The abstinence syndrome is never observed. The postintoxication period is characterized by general malaise, weakness, sleepiness, depression, paraesthesiae, tremor, cramps in the facial muscles. A chronic use of the drug develops the organic psychosyndrome with a sharp hypomnesia, disturbance of attention, inability to control one’s own actions, disruption of the cognitive function. In case of a prolonged abstinence from the use of the drug the patients’ mental faculties improve. Phencyclidine narcomania is characterized by frequent relapses of the illness.

Abuse of ketamine. The latter is used with medical purposes in anaesthesiology for transitory narcosis. Ketamine causes a rapid and short-term effect resembling that of phencyclidine. It is injected intramuscularly and intravenously in the form of 5 % solution. The effect of the drug begins 15 minutes following its injection and lasts up to 3 hours.

After taking the drug, the patient’s mood becomes higher, he develops a feeling of an unusual bliss, some lightness in the body, flight, infinity of the surrounding space, phenomena of derealization and depersonalization, a disorder in the body scheme. Visual hallucinations are unusually vivid, sometimes of a frightening type, but they arouse some interest in the patients, rather than fear. At the height of the intoxication

there is disturbance of consciousness with disorientation, a feeling that the patients are in some infinite space, they communicate with the God or devil, may hear some extraterrestrial music.

Use of ketamine rapidly develops physical dependence, sometimes as early as after a few injections. Tolerance rapidly increases, single doses and their daily number become larger, in some cases the daily dose reaches to 1,000-1,500 mg of ketamine. No abstinence syndrome in ketamine abuse has been described, but an expressed pathological drive for the drug, aggravated postintoxication symptoms and frequent relapses are evidence of physical dependence.

Synthetic Drugs

The synthetic drugs known as “designer drugs” or another name – “New psychoactive substances ” - man-made chemicals rather than natural ingredients.

One of the major risks associated with synthetic drugs is that you won't know what is in them, or the toxicity of the active substances. As part of the manufacturing process, dangerous by-products can also be formed of unknown toxicity. Compounds used to manufacture the drug can cause them to be converted to other unknown compounds of unknown toxicity. This can result in unknowingly mixing drugs and serious side effects.

History of synthetic drugs begun from amphetamine, that was first made in 1887 in Germany and methamphetamine, more potent and easy to make, was developed in Japan in 1919 till synthesized "N-bomb" - new synthetic drug (N-2-methoxy-benzyl). Let talk about that more details. Synthetic drugs including:

- ✓ Methamphetamine
- ✓ Ecstasy
- ✓ LSD
- ✓ “synthetic marijuana” (Spice or K2)
- ✓ “synthetic stimulants” (Bath Salts)
- ✓ “N-bomb.”

METHAMPHETAMINE

Methamphetamine (meth) is a stimulant, that produced is mainly made with diverted products that contain pseudoephedrine.

Regular meth is a pill or powder. Crystal meth resembles glass fragments or shiny blue-white “rocks” of various sizes. Patients is swallowed, snorted, injected, or smoked meth. Users may take higher doses of the drug, take it more frequently, or they change their method of intake for intensify the effects of meth.

Meth is a highly addictive drug with powerful stimulating properties in relation to the central nervous system (CNS). Effect and duration of drug depends on the form of use, who smoke or inject it report a brief, intense sensation or rush. When taken orally or snorted instead of a rush, a long maximum lasts, which is reported to last up to 12 hours. Clinical effect release of very high levels of the dopamine neurotransmitter in the brain region, which regulate the feeling of pleasure.

Addiction persons can exhibit violent behavior, anxiety, confusion, insomnia, and psychotic features including paranoia, aggression, visual and auditory hallucinations, mood disturbances, and delusions — such as the sensation of insects creeping on or under the skin. Such paranoia can result in homicidal or suicidal thoughts. Studies reported that as much as half of the dopamine producing cells in the brain can be damaged and also result in serotonergic neurotoxicity after prolonged exposure to relatively low levels of meth.

Small dose of meth can result in: increased wakefulness, increased physical activity, decreased appetite, rapid breathing and heart rate, irregular heartbeat, increased blood pressure,hyperthermia (overheating).

High doses can result in: elevate body temperature to dangerous level, convulsions, cardiovascular collapse, death.

Meth use may also cause extreme anorexia, memory loss, and severe dental problems.

Over doses may result in death from stroke, heart attack, or multiple organ problems caused by overheating.

ECSTASY/MDMA

MDMA (3,4-Methylenedioxymethamphetamine) stimulant and psychedelic that produces an exciting effect, distortions in time and perception and increased pleasure.

Effect of MDMA: euphoria, feelings of closeness, empathy, and sexuality. Users mainly involves swallowing tablets (50-150 mg), pills, candy. Tablet are sometimes crushed and snorted, occasionally smoked, but rarely injected. MDMA is also available as a powder.

Drug has mainly affects brain cells that use the chemical serotonin to communicate with each other. Serotonin helps to regulate mood, aggression, sexual activity, sleep, and sensitivity to pain. MDMA may increase the risk of long-term, perhaps permanent, problems with memory and learning. MDMA causes changes in perception, emotions - including euphoria and increased sensitivity to touch, energy, sensual and sexual arousal. Psychological effects also include confusion, anxiety, depression, paranoia, sleep problems, and drug craving.

Somatic and physical effects of use of MDMA - increased motor activity, alertness, heart rate, blood pressure, muscle tension, tremors, involuntary teeth clenching, muscle cramps, nausea, faintness, chills, sweating, and blurred vision, severe dehydration. Damage to the serotonin system could be results of chronic use of MDMA.

Overdose can interfere with the body's ability to regulate temperature. On occasions, this can lead to a sharp increase in body temperature (hyperthermia), resulting in liver, kidney, and cardiovascular system failure, and death. Potentially, harmful levels can be reached by repeated drug use within short intervals, because MDMA can interfere with its own metabolism (that is, its breakdown within the body).

LSD

LSD (Lysergic acid diethylamide) is a potent hallucinogen that has a high potential for abuse and currently has no accepted medical use in treatment.

LSD is an odorless and colorless substance with a slightly bitter taste, LSD is abused orally. LSD is available in saturated absorbent paper (e.g., blotter paper, divided into small, decorated squares, with each square representing one dose), tablets or "micro dots," saturated sugar cubes, or in a liquid form.

The physical and somatic effects of LSD: dilated pupils, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite, sleeplessness, dry mouth, and tremors

After ingestion, during the first hour, users may experience visual changes with extreme changes in mood. While hallucinating, the user may suffer impaired depth and time perception accompanied by distorted perception of the shape and size of objects, movements, colors, sound, touch, and the user's own body image.

The ability to make sound judgments and see common dangers is impaired, making the user prone to injury. It is possible for users to suffer acute anxiety and depression after an LSD "trip." Hallucinogen Persisting Perception Disorder, which may include fragmentary recurrences of certain aspects of the drug experience or "flashbacks" have been reported days, and even months, after taking the last dose.

Overdose of LSD cause of more intense "trip" episodes, psychosis, and possible death.

"BATH SALTS"

"Bath salts" - synthetic stimulants often referred to as "bath salts" are from the synthetic cathinone class of drugs. Synthetic cathinones are central nervous stimulants, these substances are often marketed as "bath salts," "research chemicals," "plant food," "glass cleaner," and labeled "not for human consumption".

Patients are usually ingested "bath salts" by sniffing/ snorting. They can also be taken orally, smoked, or put into a solution and injected into veins.

Synthetic cathinones are abused for feel euphoria and alertness. Psychological effects from the use of these drugs include such as confusion, acute psychosis, agitation, aggressive, violent, and self destructive behavior.

Abuse of cathinones associated with adverse or toxic effect, including rapid heartbeat, hypertension, hyperthermia, prolonged dilation of the pupil of the eye, breakdown of muscle fibers that leads to release of muscle fiber contents into bloodstream, teeth grinding, sweating, headaches, palpitations, seizures.

Psychological effect - paranoia, hallucinations, and delusions.

Over dose could be cause of death for individuals abusing drugs in this class.

K2 and SPICE

There are two names K2 and Spice for synthetic designer drugs that are intended to mimic THC, the main psychoactive ingredient of marijuana. These designer synthetic

drugs are from the synthetic cannabinoid class of drugs that are often marketed and sold under the guise of “herbal incense” or “potpourri.” Synthetic cannabinoids are sold as “herbal incense” and “potpourri” under names like K2 and Spice, as well as many other names.

Spraying or mixing the synthetic cannabinoids on plant material provides a vehicle for the most common route of administration - smoking (using a pipe, a water pipe, or rolling the drug-laced plant material in cigarette papers).

Acute psychotic episodes, dependence, and withdrawal are associated with use of these synthetic cannabinoids. Some individuals have suffered from intense hallucinations and delusions. Other effects include severe agitation, disorganized thoughts, paranoid delusions, and violence after smoking products laced with these substances.

Somatic adverse effects included tachycardia (elevated heart rate), elevated blood pressure, unconsciousness, tremors, seizures, vomiting, hallucinations, agitation, anxiety, pallor, numbness, and tingling.

Effect of overdose of synthetic cannabinoids including agitation, anxiety, seizures, stroke, coma, and death by heart attack, acute kidney injury or organ failure.

N-BOMB

N-BOMB - is a class of emerging new psychoactive substances that has recently gained prominence in the drug abuse market. NBOMes are N-2-methoxy-benzyl substitute, commonly referred to as “N-bomb” or “Smiles,” is a powerful synthetic hallucinogen sold as an alternative to LSD or mescaline.

N-bomb is a synthetic hallucinogen that is used in biochemistry research for mapping the brain's usage of the type 2A serotonin receptor; it is also sometimes used for recreational purposes. A derivative of the substituted phenethylamine 2C-I family

N-bomb is sold in liquid or powdered form or on soaked blotter paper. It has a strong bitter metallic taste, and some dealers add mint or fruit flavoring to the liquid and blotter varieties.

As N-bomb creates no effect if swallowed, users place it under their tongue, where it gets absorbed. One hour after the ingestion users began to experience euphoria, tachycardia, and visual hallucinations. After several hours the drug effects continued to increase in intensity and the man displayed anxiousness and confusion. Then feeling trapped, they became anxious and began to panic; in order to end this experience he attempted to commit suicide using a pair of scissors stabbing himself in the neck and chest.

N-bomb adverse effects: tachycardia, hypertension, agitation, aggression, visual and auditory hallucinations, seizures, hyperpyrexia, clonus, elevated white cell count, elevated creatine kinase, metabolic acidosis, and acute kidney injury.

Polynarcomaniae and complicated narcomaniae

Polynarcomaniae are the diseases when several narcotic substances are used simultaneously or in a certain sequence, and the patient has formed dependence upon each of them.

Complicated narcomania is a disease when the narcomaniac has dependence upon narcotics and substances which are not regarded as narcotic. The most common is narcomania complicated by alcoholism.

Polynarcomaniae and complicated mononarcomaniae often develop at the stage of choice of a preferred narcotic, as well as in the initial state when narcomaniacs strive for getting a desirable effect with help of additional psychoactive drugs. But they also can develop at other stages of narcomania formation.

The commonest are opium-barbiturate, codeine-glutethimide and opium-efedron polynarcomaniae. Of complicated narcomaniae, more frequent are abuses of opiates and diphenylhydramine hydrochloride, benzhexol hydrochloride, tranquillizers, alcohol, a simultaneous abuse of sedatives- soporifics and alcohol. Most narcomaniacs begin their abuse with hashish, then other drugs are added.

The clinical picture of the abstinence syndrome in polynarcomaniae and complicated narcomaniae includes the signs characteristic of each of the drugs used. But if among the preparations there are opiates then the abstinence is mostly characterized by the action of the drugs of this group.

Toxicomaniae

Toxicomaniae are the diseases, which are caused by abuse of the substances not included in the state list of narcotics and manifesting themselves by mental (and sometimes physical) dependence upon them (do not have any juridical criterion).

Classification of toxicomaniae

- 1) Toxicomaniae caused by abuse of tranquillizers and soporifics
- 2) Toxicomaniae caused by abuse of psychostimulants
- 3) Toxicomaniae caused by abuse of hallucinogens
- 4) Abuse of atropine-containing drugs
- 5) Abuse of antihistamine preparations
- 6) Abuse of benzhexol hydrochloride
- 7) Toxicomaniae caused by inhalation of volatile organic solvents
- 8) Nicotinism
- 9) Polytoxicomaniae

Toxicomaniae caused by abuse of tranquillizers

The most toxicogenic are benzodiazepine tranquillizers, the most wide-spread group of the drugs in the world (diazepam, lorazepam, nitrazepam, clonazepam, chlordiazepoxide).

Benzodiazepine-induced intoxications with a feeling of rest develop, the mood improves, all the problems come to the foreground. There is development of obnubilation; sleep, or sopor in over dose cases.

A long-term abuse of tranquillizers results in the formation of an organic defect of the personality with an intellectual-mnestic decrease, listlessness, hard-heartedness, rudeness, selfishness, cruelty towards friends and relatives.

Nicotinism (tobacco dependence)

Nicotine possesses a high degree of narcogenity, proved at least by the following fact: 85 % of people, who have smoked their first cigarette, later become smokers. Not all the smokers develop dependence. Along with so-called ardent smoking there is moderate smoking and smoking for removal of mental stress. On the basis of numerous studies made by researchers of our and other countries it is possible to say about nicotine-induced mental and physical dependence. The phenomena of abstinence develop 1.5-2 hours after the last cigarette smoked.

If compared with nonsmokers of the same age, smokers having phenomena of dependence more frequently develop the asthenic syndrome, they easier get tired, often make mistakes fulfilling the tasks which require tension and attention.

By the literature data, they are characterized by impulsive behaviour, a lower level of education, anxiety, ill will towards other people. Smokers oftener develop insults and infarctions with resultant defect-organic mental disorders up to dementia. Their hearing is significantly diminished, the sense of taste is affected. Tobacco smoking causes severe disturbances in the internal organs.

General principles in treating narcomaniae and toxicomaniae

The treatment of narcomaniae and toxicomaniae is provided by several stages. *The first stage* in the majority of patients begins with a sharp absolute abolition of the drug. Excluded are the cases of abuse with barbiturates, sedatives-soporifics, combinations of other narcotic drugs with high doses of these preparations, as well as presence of a severe accompanying pathology. In such cases the drug is abolished stage by stage. The treatment includes control of the abstinence syndrome and disintoxication measures directed at correction of the somatoneurologic and mental disorders.

At the second stage, the treatment includes general health improving therapy up to the absolute restoration of the somatic functions, as well as correction of behavioural and mental disorders up to the normalization of the mental state.

The third stage consists in employing purposeful therapy for the dependence syndrome. The therapy should be pathogenetically substantiated with regard for the chemical structure and the mechanism of action of the narcotic, and clinical peculiarities of each patient (prevalence of physical or mental dependence, psychopathological arrangement of the pathological drive for the drugs, peculiarities in its dynamics [periodical, constant], pathocharacterological peculiarities of the patient).

The fourth stage: antirelapse supportive therapy with regard for the conditions of the appearance of previous relapses of the disease. External situations and endogenous factors, which cause exacerbation in the drive for drugs and result in relapses, are to be revealed.

MENTAL AND BEHAVIORAL DISORDERS VILE PSYCHOACTIVE SUBSTANCES ABUSE DUE TO DSM-5

Many psychoactive substances are readily available with the potential for abuse and dependence. Alcohol is perhaps the oldest and most important example, but other substances of abuse have also been around since ancient times. Many others are a product of modern chemistry, and additional drugs continue to be synthesized rapidly.

The availability of alcohol and other psychoactive substances has made problems today more severe than in the past, such as an increase in the number of arrests and imprisonment for drug offenses, which has led to overcrowding in prisons. At the same time, the concept of addictions as a disease has established itself, but getting the right treatment in an overloaded and poorly funded system is a serious problem.

Epidemiology

Nearly a quarter of a billion people between the ages of 15 and 64 years, used at least one psychoactive substance in 2014. 247 million people used psychoactive substances in 2015. Over 29 million people who use drugs are estimated to suffer from drug use disorders, and of those, 12 million are people who inject drugs (PWID), of whom 14.0 per cent are living with HIV, but only 1 in 6 people with drug use disorders is in treatment.

Two hundred and seven thousand four hundred (207,400) drug-related deaths in 2014, corresponding to 43.5 deaths per million people aged 15-64, the number of drug-related deaths worldwide has also remained stable.

Overdose deaths contribute to between roughly a third and a half of all drug-related deaths, which are attributable in most cases to opioids.

The mortality rate from drug overdose is much higher than from all causes in the general population.

Psychoactive substances include those with the use of which various subjectively pleasant mental states arise: euphoria, increased activity, subjective feeling of comfort, calmness. Substance abuse leads to addiction (mental, and often physical). Long-term use of these substances leads to a deterioration in personality, a decrease in cognitive abilities and social maladaptation.

The 2013 National Drug and Health Survey (NSDUH) found that 21.6 million Americans over 11 years of age were abusing or dependent on drugs or alcohol. It has been shown that different races have their own particularities of substance use and abuse and treatment, and therefore institutions providing mental health and substance abuse services should take this into account.

Substance Abuse and Mental Health Services Administration (SAMHSA) publishes the following information on minority groups' past-month (considered current) illicit drug abuse in 2014: Native Hawaiian and Other Pacific Islander (NHOPIs): 15.6 percent; American Indians and Alaska Natives: 14.9 percent; African Americans: 12.4 percent; National Average: 10.2 percent; Hispanics: 8.9 percent; Asian Americans: 4.1 percent.

While about 60 percent of those admitted to publicly funded substance abuse treatment programs in 2008 were for white or Caucasian individuals, according to the National Institute on Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA) reports that minority groups or people of color may suffer from substance abuse or mental health disorders at high rates part due to difficulties accessing care, the right kind of care not being available, and environmental, social, and financial concerns may be barriers to treatment.

Alcohol usage may be highest among Caucasians, with 57.7 percent reporting current alcohol consumption (or drinking alcohol in the past month), as published by the 2013 NSDUH. This was followed by multiracial individuals, or those of at least two races, at 47.7 percent; African Americans at 43.6 percent; Hispanics at 43 percent; NHOPIs at 38.4 percent; and American Indians or Alaska Natives at 37.3 percent. Asians drank the least in the past 30 days at a rate of 34.5 percent of the population.

Binge drinking is a pattern of potentially dangerous alcohol consumption that raises one's blood alcohol concentration (BAC) to 0.08 g/dL or above, which usually means about four drinks for a woman or five for a man in a two-hour timespan.

Binge drinking rates for the different races in 2013 as indicated by NSDUH were as follows: NHOPIs: 24.7 percent; Hispanics: 24.1 percent; Whites: 24 percent; American Indians and Alaska Natives: 23.5 percent; Blacks: 20.1 percent; Multiracial individuals: 19.6 percent; Asian Americans: 12.4 percent

Ten substance-related disorder classes are reviewed in this chapter: alcohol; caffeine; cannabis; hallucinogens (with separate categories for phencyclidine and other hallucinogens); inhalants; opioids; sedatives, hypnotics, and anxiolytics; stimulants; tobacco; and other (or unknown) substances. DSM-IV's pathological gambling, now renamed gambling disorder, has been moved to this class, reflecting evidence that gambling activates the brain's reward system similarly to drugs of abuse. Although the term addiction it is not used as a diagnostic term in DSM-5 because of its uncertain definition. Nonetheless, some clinicians choose to use the word as a form of shorthand - as do we - to describe severe problems related to alcohol or drug use (e.g., addict, addictive, addiction).

Substance use disorders involve the inappropriate use of a substance. In the past, problematic use was diagnosed as either abuse or dependence, distinguished mainly on the basis of severity. In DSM-5, abuse and dependence are merged so that each class of drug has its own criteria set for a "use" disorder.

Research had shown that abuse and dependence diagnoses overlapped and that clinicians had trouble distinguishing one from the other. Also, intoxication and withdrawal are now separate disorders for most of the substances: intoxication is a reversible syndrome due to the recent use of a substance, whereas withdrawal consists of a cluster of symptoms with an onset closely following cessation of the drug (or reduction in dose) that is relatively specific to a drug (or drugs).

DSM-5 substance-related and addictive disorders

Alcohol-related disorders: Alcohol use disorder, Alcohol intoxication, Alcohol withdrawal.

Caffeine-related disorders: Caffeine intoxication, Caffeine withdrawal.

Cannabis-related disorders: Cannabis use disorder, Cannabis intoxication, Cannabis withdrawal.

Hallucinogen-related disorders: Phencyclidine use disorder, Other hallucinogen use disorder, Phencyclidine intoxication, Other hallucinogen intoxication, Hallucinogen persisting perception disorder.

Inhalant-related disorders: Inhalant use disorder, Inhalant intoxication.

Opioid-related disorders: Opioid use disorder, Opioid intoxication, Opioid withdrawal.

Sedative-, hypnotic-, or anxiolytic-related disorders: Sedative-, hypnotic-, or anxiolytic use disorder, Sedative-, hypnotic-, or anxiolytic intoxication, Sedative-, hypnotic-, or anxiolytic withdrawal.

Stimulant-related disorders: Stimulant use disorder, Stimulant intoxication, Stimulant withdrawal.

Tobacco-related disorders: Tobacco use disorder, Tobacco withdrawal.

Other (or unknown) substance-related disorders

Other (or unknown) substance-induced disorders

Substance-related disorders

Gambling disorder.

The substance use disorders follow a set of standard criteria. In each case 2 or more of 11 problematic behaviors must occur within a 12-month period leading to clinically significant impairment or distress. The 11 symptoms involve overall groupings of impaired control, social impairment, risky use, and pharmacological criteria (i.e., evidence of tolerance or withdrawal). As a general rule, the use of one substance greatly increases the chance that a person will use another. In DSM-5, if criteria are met for more than one substance use disorder, all are diagnosed (e.g., severe alcohol use disorder, mild cannabis use disorder).

Substance use disorders are rated for severity: mild requires the presence of two or three symptoms; moderate, four or five symptoms; and severe, six or more symptoms. In addition, clinicians can specify if the disorder is in "early remission"

(i.e., no symptom criteria met for the past 3 months), or "sustained remission" (i.e., no symptom criteria met for the past 12 months).

Etiology of Substance-Related Disorders

The combination of genetics and individual biology and human psychology and the substance itself leads to addictive disorders. None of the factors determines whether a person will abuse drugs or alcohol. Some people seem to have an inherited vulnerability to substance abuse. Studies prove the primary role of genetics in the etiology of disorders associated with the use of alcohol and other substances (such as tobacco, opioids), including family studies, twins and adoption.

We are only beginning to understand the neurobiological mechanisms, the formation of addiction, but genetic factors have a weight of 40-60% of the risk of developing addiction.

Social and family values affect the risk of using illegal drugs. When parents smoke cigarettes, drink alcohol or use drugs, the likelihood that children are more prone to use these substances is considered to be socially acceptable.

Moreover, people whose friends use alcohol or drugs are also more likely to use them, which indicates that peers influence a person's choice. This is due to the lack of close ties with parents, a lot of time spent outside the home, and a greater dependence on peers and not on parents.

Risk and protective factors

Individual-level risk factors

Characteristics of a person play an important role in predicting the likelihood of substance use, whether they switch to the harmful use of substances, or they begin to have disorders associated with the use of psychoactive substances, or the person will refrain from such use. This is important for three reasons: (a) neurobiological functioning, personality, emerging stress, and survival strategies help determine a person's response to the prevailing social and environmental impacts that contribute to outcomes; (b) it was shown that personal-level characteristics predict or mitigate results, as they interact with environmental influences in unique and complex ways; and (c) knowledge these characteristics is crucial in choosing the optimal individual and group preventive and therapeutic interventions.

This information can also help to identify opportunities in the development of personality for the implementation of the most effective areas of prevention. Positive dynamics of these characteristics is possible if the intervention positively affects its goals (mediation effect). Special personality traits were associated with external disorders, which were constantly associated with the use and harmful use of substances.

These characteristics include heightened reward sensitivity, poor inhibitory control, aggression and novelty-seeking. Variation in these personality dimensions,

particularly impulsivity and novelty-seeking, may contribute to the initiation of substance use, as well as the transition from initial to intermittent and then regular substance use, the transition from harmful use to dependence or addiction, and the propensity for repeated relapse after achieving abstinence. Individuals with these traits tend to seek highly stimulating and risky situations and show less anxiety in anticipation of the consequences of their behaviour.

The influence of personality also has a different effect on complex forms of behavior at different stages of personality formation. Normal development in adolescence is characterized by an increased level of impulsivity and a desire for novelty, including due to sharp fluctuations in the level of hormones that affect the development of the brain and other systems. Adolescents with a high level of any combination of these personality traits are at an increased risk of harmful substance use. These characteristics may contribute to individual differences in the enhancing effects of drugs.

Behavioural and mental health

A very important problem is comorbidity - the simultaneous presence of mental health disorders and substance abuse. So, internalizing symptoms, such as post-traumatic stress disorder, depression and anxiety, along with externalizing behavior, such as a behavior disorder, attention deficit hyperactivity disorder, opposition-causing disorder, antisocial personality disorder and some other mental conditions, are closely and consistently associated with the risk of substance misuse.

People with these disorders tend to use substances more often and do so at an earlier age than those who don't. For example, mood and anxiety disorders double the risk of a person developing a disorder related to substance use. The presence of mental and behavioral health disorders can exacerbate the role of models of poor or non-adaptive stress reactivity in the development path to substance use. The presence of mental and behavioural health disorders may exacerbate the role of poor or maladaptive stress reactivity patterns in the developmental pathways to substance use. People with internalizing disorders tend to have higher levels of arousal in the brain systems, which are responsible for stress reactions, which can lead to attempts to treat symptoms of anxiety and depression on their own.

Persons with external disorders have a lower level of arousal in these systems, which is associated with a relative lack of attention to the consequences and the need for additional stimulation. The likelihood that a person with conditions such as post-traumatic stress disorder or attention deficit hyperactivity disorder will effectively cope with social problems is reduced, because it requires pristine neurocognitive and emotional functions, which are often impaired with these mental disorders.

Some of the mental health conditions that may be correlated with drug use have a gender factor that translates into a gender difference in terms of risk of misuse and

drug dependence: men are more likely to show asocial personality disorder, while women show higher rates of mood disorder and anxiety. Among both adolescents and adults, efforts to self-manage psychiatric symptoms further compound the harmful use of substances, as well as adding to the challenges associated with resistance to treatment for substance use disorders.

Statistics on Specific Population Demographics and Addiction in USA:

Adolescents (aged 12-17): In 2017, approximately 4% of the American adolescent population age 12 to 17 suffered from a substance use disorder; this equals 992,000 teens or 1 in 25 people in this age group. About 443,000 adolescents age 12 to 17 had an alcohol use disorder in 2017, or 1.8% of adolescents. An estimated 741,000 adolescents suffered from an illicit drug use disorder in 2017, or about 3% of this population.

Young adults aged 18-25: About 5.1 million young adults age 18 to 25 battled a substance use disorder in 2017, which equates to 14.8% of this population and about 1 in 7 people. About 3.4 million young adults age 18 to 25 had an alcohol use disorder in 2017, or about 10% of young adults. About 2.5 million young adults had an illicit drug use disorder in 2017, or about 7.3% of this population. Heroin use among young adults between 18 and 25 years old doubled in the past decade.

Over age 26: Approximately 13.6 million adults age 26 or older struggled with a substance use disorder in 2017, or 6.4% of this age group. About 10.6 million adults age 26 and older had an alcohol use disorder in 2017, or about 5% of this age group. About 4.3 million adults age 26 or older had an illicit drug use disorder in 2017, or 2% of this age group.

Elderly individuals: More than 1 million adults age 65 or older had a substance use disorder in 2017.7. That same year, about 978,000 of people in this age group had an alcohol use disorder and about 93,000 had an illicit drug use disorder. Two-thirds of the population over the age of 65 who struggle with alcohol use disorders developed the disorder before age 65.6. Between 21% and 66% of elderly individuals battling a substance use disorder also suffer from a co-occurring mental health disorder.

Men vs. women: In 2017, about 9.4% of men and 5.2% of women age 12 and older had a substance use disorder. Men may be more likely to abuse illicit drugs than women, but women may be just as prone to addiction as men when they do abuse them.

Ethnicity/race: American Indians and Alaska Natives age 12 and older had the highest rate of substance abuse and dependence in 2017, at 12.8%. Whites had a 7.7% rate of substance abuse in 2017. About 6.8% percent of African Americans struggled with substance use disorders, while the percentage of Hispanics or Latinos who suffered from substance use disorders was 6.6%. Approximately 4.6% percent of Native Hawaiians and Pacific Islanders suffered from substance use disorders. Asian Americans had the lowest rate of substance use disorders at 3.8%.

Criminal justice/employment status: Almost twice as many people who are unemployed struggle with addiction than those who are full-time workers, CNN Money Around 17% of the unemployed and 9% of the employed population struggle with a substance use disorder. Of the 2.3 million people in American prisons and jails, more than 65% meet the criteria for addiction. Around 75% of individuals in a state prison or local jail who suffer from a mental illness also struggle with substance abuse, and the opposite is also true.

Recent trends in the use of heroin and the non-medical use of prescription opioids in the United States

In the United States of America, the non-medical use of prescription opioids and heroin has continued to interact in the market in recent years. Since the high prevalence and associated morbidity and mortality from non-medical use of prescription opioids has become a major public health problem, the recent increase in heroin use has led to a sharp increase in heroin overdose mortality.

Statistics on Addiction to Specific Substances

Cocaine: About 966,000 American adults (over age 12) struggled with a cocaine use disorder in 2017. That same year, 637,000 people age 12 and older received treatment for a cocaine use disorder either in their last or current stay in rehabilitation.

Heroin: About 652,000 people age 12 and older had a heroin use disorder in 2017. Almost a quarter of people who abuse heroin will become addicted to it. Heroin use has risen in most demographic groups in the United States over the past 2 decades, the Centers for Disease Control and Prevention (CDC) reports. Individuals addicted to alcohol are 2 times more likely to also be addicted to heroin, while those addicted to marijuana are 3 times more likely, individuals addicted to cocaine are 15 times more likely, and people addicted to prescription drugs are 40 times more likely. The highest at-risk population for heroin addiction is non-Hispanic white males between the ages of 18 and 25 who live in large cities.

Prescription drugs: The most common types of prescription drugs abused in 2017 were pain relievers, tranquilizers, stimulants, and sedatives. In 2017, about 1.7 million people age 12 and older had a pain reliever use disorder, or about 0.6% of this population. Women may more rapidly develop a prescription painkiller dependence than men. They are also more likely to have chronic pain, be prescribed pain relievers, and receive higher doses. According to a study published in the journal Substance Abuse Treatment, Prevention, and Policy, individuals who were admitted to opioid treatment programs who abused only prescription opioids, or those who abused both heroin and prescription opioids, were about 5 years younger than individuals admitted solely for heroin abuse or dependency.

Marijuana: Approximately 4.1 million American adults over the age of 12 battled a marijuana use disorder in 2017. The majority of people struggling with marijuana addiction in 2017 were between the ages of 12 and 25. Almost 6% of full-time college students in the United States were daily marijuana smokers in 2014. This is more than triple the number of daily smokers in this population 20 years prior.

Alcohol: In 2017, an estimated 14.5 million American adults age 12 and older battled an alcohol use disorder, or 5.3% of this population. Over half of all American adults have a family history of problem drinking or alcohol addiction. More than 10% of U.S. children live with a parent with alcohol problems. An estimated 88,000 people die from alcohol-related causes annually. Alcohol is the third-leading cause of preventable death in the United States. 47% of the 78,529 liver diseases among people age 12 and older in 2015 involved alcohol. 40% of all hospital beds in the United States are used to treat conditions related to alcohol consumption.

Worldwide, drug use among older people remains lower than among young people. The highest levels of drug use are observed among people aged 18–25 years. This situation is typical for most countries and regions, as well as for most types of drugs.

In 28 Member States of the European Union, as well as in Norway and Turkey, the use of amphetamines and ecstasy is two to three times higher among people under the age of 35 than among older people. At the same time, the use of Ecstasy is almost 20 times higher among people aged 15–24 years than among people aged 45–54 years.

However, prevalence rates of cocaine during life in Europe among people aged 15–24 years old and those aged 45–54 years old are comparable, while cannabis use during life is much higher among people under 35 years old. This may indicate differences in age at the start of use of these substances, as well as different historical levels of use among young people in Europe.

Women, girls and youth

There are marked differences between men and women who use drugs in terms of drug preferences and drug vulnerability. Since drug users are mostly men, this poses a risk that the full range of assistance may not provide optimal satisfaction for the needs of women drug users who also do not have access to such services.

In addition, women suffering from drug addiction and HIV are more vulnerable and more stigmatized than men. In addition, they suffer from concomitant mental disorders to a greater extent than men, and they are more likely to become victims of violence and abuse. Women also often bear the heavy burden of violence and deprivation associated with drug dependence of family members, which impedes the goal of eliminating all forms of violence against all women and girls. Women offenders and prisoners, especially those with drug-related disorders, face

particular difficulties, as in many cases criminal justice systems are not yet equipped to meet the special needs of women.

Economic development

The harm associated with the drug problem can vary in size and shape in different countries, both developed and developing, but somehow it affects everything. Vulnerability to drugs, whether in terms of cultivation, production, trafficking or use, exists in countries at all levels of development.

The relationship between economic development and drugs is particularly evident in the case of illicit drug crop cultivation. In rural areas, socio-economic factors such as poverty and lack of sustainable livelihoods are important risk criteria for illicit cultivation. They also indicate a low level of development, which, along with other development problems related to safety and management, allows large-scale illicit cultivation.

Higher socioeconomic groups are more likely to use drugs than lower socioeconomic groups, however it is lower socioeconomic groups that pay a higher price because they are more likely to become addicted to drugs.

There is a close connection between social and economic problems and drug-related disorders. This pattern can also be seen by looking at various aspects of marginalization and social exclusion, such as poverty, unemployment and low levels of education.

The role in shaping the drug problem in a given country is played by its geographical location, proximity to the drug-producing area or major drug trafficking route, such as higher rates of opiate use in the Near and Middle East and South-West Asia, as well as cocaine use, including “crack” cocaine in South America and West Africa.

Dividing data on people who use drugs based on income level shows that in high-income countries, drug use prevalence is higher for all drug categories. Correspondingly expensive drugs find easier support in countries with a relatively higher per capita income.

Shift between injecting heroin, amphetamines and new psychoactive substances in Europe

In some European countries (Austria, Belgium, Czech Republic, France, Germany, Ireland, Poland, Spain and the United Kingdom), small, localized groups of high-risk drug users who are in contact with low-threshold services, psychiatric facilities and treatment centres for drug users and who used to inject heroin and amphetamines have switched to injecting NPS such as synthetic cathinones.

Reports to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) suggest that drug users who inject synthetic cathinones are primarily

those who have been injecting heroin and amphetamines and have now either started injecting synthetic cathinones or included it in their drug use repertoire. People who inject synthetic cathinones include those who are on opioid substitution treatment, as well as young people beginning their drug-injecting use.

In England and Wales, the annual prevalence of drug use was highest in the 20–24 age group for all drug types in the period 2016–2017. For those aged 45 and older, the annual prevalence of drug use was considerably lower.

Emerging methamphetamine use among opiate users in the Islamic Republic of Iran

In the Islamic Republic of Iran, where opiates remain the main drug consumed by problem drug users, methamphetamine use has emerged as another drug of concern in recent years. Methamphetamine use has also been described as a new form of polydrug use among opiate users. Many local studies of opiate users in methadone treatment have reported the use of methamphetamine among the clients of treatment centres. For example, a study at an opioid substitution treatment clinic in Zahedan Province showed that methamphetamine use among opioid users in treatment increased from 6 per cent in 2009 to almost 20 per cent in 2011. Another study of 378 people seeking treatment at a therapeutic community centre found that the urine samples of nearly 7 per cent of those people had tested positive for methamphetamine. Methamphetamine use has reportedly had a negative influence on opioid-dependent patients in treatment who wrongly believed that methamphetamine use could help control their opiate dependence and associated problems such as depression and poor sexual performance and increase their physical energy, attention and concentration and improve social relationships. Methamphetamine use among heroin users has also been reported in other parts of Asia.

Tolerance, cross-tolerance and substitution: managing the effects of drugs

The complex interaction of individual, biological, cultural, social and environmental factors increases or weakens a person's vulnerability to using or continuing to use drugs. Continued use of the drug is considered a conditional response to the positive reinforcement that a person experiences as a result of drug use.

In the later stages, a person continues to use drugs simply to maintain drug addiction, which is characterized by forcing them to use drugs, despite evidence of harmful effects, the development of tolerance - by increasing the amount of medicine or drugs to achieve the same effect and withdrawal state - and the negative consequences that arise when a person stops using alcohol or drugs.

Drugs taken together can have a cumulative or synergistic effect, which increases the overall psychoactive experience; that is one way in which drug users may

address the development of tolerance. A related phenomenon is “crosstolerance” — the pharmacological ability of one drug to have generally the same effect on the nervous system as another drug. The phenomenon of cross-tolerance explains in part the frequent substitution of drugs that have a similar effect.

The use of alcohol with benzodiazepines, cannabis or cocaine is described; simultaneous use of heroin, benzodiazepines and antihistamines; drinking alcohol or other opioids (methadone, fentanyl, etc.); and the use of cocaine and other stimulants.

In other cases, people who use drugs can attenuate the negative effects of drugs while simultaneously or sequentially using additional drugs with opposite effects. One such way is speedball — when cocaine is injected with heroin or other opioids or when heroin is used with methamphetamine or amphetamine.

Diagnosis and Assessment of Substance-Related Disorders

The assessment of substance-related disorders requires a careful history, a thorough physical examination, and a detailed mental status examination. Few addicted persons will spontaneously report their alcohol or drug use. More commonly, these individuals will present for evaluation of a medical complaint or for emotional distress. Some will be brought in by concerned family members seeking assessment for their loved one.

A detailed interview may help to uncover social, marital, occupational, or legal problems that may have contributed to the substance use. The clinician should remember that misuse of a substance - alcohol, drugs or both – can lead to the development of depression, mania, or psychoses. Likewise, many addicted persons will have co-occurring mental disorders, such as major depression, bipolar disorder, or an anxiety disorder, that should be diagnosed and treated.

Personality disorders – particularly antisocial and borderline personality disorders – are common in addicted persons and may contribute to continued substance misuse. Additional history obtained from relatives or friends, or from other physicians, will help fill in the gaps. Even patients who are straightforward about their misuse of substances may minimize its extent. Once the physician’s suspicion has been raised, he or she should inquire specifically about each class of commonly misused substances and record the patient’s pattern of use.

Alcohol use disorder is a problematic pattern of alcohol use leading to clinically significant impairment or distress. Two or more of 11 problematic behaviors must occur within a 12-month period for the diagnosis to be made. Depending on the number of symptoms present, the disorder is specified as mild, moderate, or severe.

Separate categories are used for alcohol intoxication and alcohol withdrawal. The clinician should record all diagnoses that are present (e.g., alcohol intoxication, moderate alcohol use disorder).

DSM-5 Diagnostic Criteria for Alcohol Use Disorder

Alcohol use disorder is defined as a problematic pattern of alcohol use leading to clinically significant impairment or distress as manifested by at least 2 of the following criteria over the same 12-month period:

- Alcohol used in larger amounts or over a longer period of time than intended
- Persistent desire or unsuccessful attempts to cut down or control alcohol use
- Significant time spent obtaining, using, and recovering from the effects of alcohol
- Craving to use alcohol
- Recurrent alcohol use leading to failure to fulfil major role obligations at work, school, or home
- Recurrent use of alcohol, despite having persistent or recurring social or interpersonal problems caused or worsened by alcohol
- Recurrent alcohol use despite having persistent or recurring physical or psychological problems caused or worsened by alcohol
- Giving up or missing important social, occupational, or recreational activities due to alcohol use
- Recurrent alcohol use in hazardous situations
- Tolerance: markedly increased amounts of alcohol are needed to achieve intoxication or the desired effect, or continued use of the same amount of alcohol achieves a markedly diminished effect
- Withdrawal: there is the characteristic alcohol withdrawal syndrome, or alcohol is taken to relieve or avoid withdrawal symptoms.

Specify if:

In early remission: After full criteria for alcohol use disorder were previously met, none of the criteria for alcohol use disorder have been met for at least 3 months but for less than 12 months (with the exception that Criterion A4, “Craving, or a strong desire or urge to use alcohol,” may be met).

In sustained remission: After full criteria for alcohol use disorder were previously met, none of the criteria for alcohol use disorder have been met at any time during a period of 12 months or longer (with the exception that Criterion A4, “Craving, or a strong desire or urge to use alcohol,” may be met).

In a controlled environment: This additional specifier is used if the individual is in an environment where access to alcohol is restricted.

Specify current severity:

Mild: Presence of 2-3 symptoms.

Moderate: Presence of 4-5 symptoms.

Severe: Presence of 6 or more symptoms.

Criteria for alcohol use disorder are shown to represent the similar criteria sets for all the DSM-5 substance use disorders.

Screening

The four-question CAGE test is a simple screen that can be used to assess the presence of an alcohol use disorder. Problematic use is suggested by any positive response or overly defensive answer.

CAGE: screening test for an alcohol use disorder

C Have you felt the need to CUT DOWN on your drinking?

A Have you felt ANNOYED BY CRITICISM of your drinking?

G Have you felt GUILTY (or had regrets) about your drinking?

E Have you felt the need for an EYE-OPENER in the morning?

Blood alcohol concentration roughly correlates with level of intoxication.

The following levels apply to persons who are not tolerant to alcohol:

0-100 mg/dL: A sense of well-being, sedation, tranquility

100-150 mg/dL: Incoordination, irritability

150-250 mg/dL: Slurred speech, ataxia

>250 mg/dL: Passing out, unconsciousness

Higher concentrations—greater than 350 mg/dL—can lead to coma and death. The presence of few clinical symptoms of intoxication in a person with a level of 150 mg/dL or higher is strong evidence of an alcohol use disorder.

Medical and psychosocial hazards associated with alcohol use disorders: Drug interactions, Gastrointestinal, Esophageal bleeding, Mallory-Weiss tear, Gastritis, Intestinal malabsorption, Pancreatitis, Liver disease, Fatty infiltration, Hepatitis, Cirrhosis, Nutritional deficiency, Malnutrition, Vitamin B deficiency, Neuropsychiatric, Wernicke-Korsakoff syndrome, Cortical atrophy/ventricular dilation, Alcohol-induced dementia, Peripheral neuropathy, Myopathy, Depression, Suicide, Endocrine system, Testicular atrophy, Increased estrogen levels, Alcohol withdrawal, Uncomplicated withdrawal (the “shakes”), Seizures, Hallucinoses, Withdrawal delirium (delirium tremens), Infectious disease, Pneumonia, Tuberculosis

Cardiovascular, Cardiomyopathy, Hypertension, Cancer, Oral cavity, Esophagus, Large intestine/rectum, Birth defects, Fetal alcohol syndrome, Psychosocial, Accidents, Crime, Spouse and child abuse, Job loss, Divorce, separation.

Using alcohol will damage the central nervous system and peripheral nervous system. Peripheral neuropathy occurs in the distribution of stockings and gloves, probably the result alcohol-induced vitamin B deficiency. Cerebellar damage cause dysarthria and ataxia. Wernicke Encephalopathy May Cause from thiamine deficiency and consists of nystagmus, ataxia and impaired consciousness (which may change with thiamine injection). Wernicke-Korsakoff syndrome occurs with cognitive and memory the violation persists, although it may be reversible in a third patients. This syndrome involves an anterograde amnesia characterized by the

presence of confabulation, in which a patient invents stories to fill in memory gaps. The syndrome is associated with necrotic lesions of the mamillary bodies, thalamus, and other brain stem regions.

As a result, a major neurocognitive disorder (dementia) may develop. deficiency or direct exposure to alcohol, although the exact mechanism is unknown. Chronic alcohol abuses also associated with enlarged ventricles of the brain and dilated cortical grooves, effects that may be partially reversible when a person stops drinking. Neuropsychological testing of alcoholics in general reveals mild or moderate cognitive deficit, which, partially restored with sobriety.

Fetal alcohol syndrome (FAS) has been described in children whose mothers had problems with alcohol. This syndrome is associated with excessive drinking alcohol during pregnancy, especially when drinking drinking causes a jump in blood alcohol levels. Anomalies associated with this disorder include facial abnormalities (i.e. pump, epicanthus folds, fuzzy spot, small middle of the face), low IQ and behavior problems. FAS occurs in one to two children on 100,000 live births. Women should be informed that FAS may result from alcohol consumption during pregnancy.

Alcohol use is a common cause of traumatic injuries and gives more than 50% of all car deaths every year. House-keep injuries also common. Subdural hematomas are found in many older people who fall and get head injuries while intoxicated. The frequency of cancer of the oral cavity, tongue, larynx, esophagus, stomach, the liver and pancreas are enlarged. The exact role that alcohol plays these types of cancer are unclear because its effects are confused smoking and tobacco use.

Alcohol reduces male sexual function and can cause impotence and affect fertility, reducing levels toasterone levels. In addition, elevated levels of estrogen in the blood can cause breast augmentation (gynecomastia) and female lining (pubic hair) pattern) in men.

Psychiatric complications include intoxication and withdrawal disorders, amnestic syndromes, such as Wernicke-Korsakov's syndrome, and / or alcohol-related neurocognitive disorders. Acute depression limited to 60% of alcoholic patients. Suicide rates are high among those who misuse alcohol; at greatest risk are those with a history of interpersonal loss within the past year, best defined as the loss of an intimate relationship.

Clinical Findings

There is no standard or overall clinical picture of people who abuse alcohol. In the very early stages, alcohol abuse can be difficult to identify. Objective information from family members and work colleagues is important to detect early symptoms such as decreased labor productivity, being late or absenteeism, irritability or moodiness. As the disorder progresses, physical changes, such as development of acne rosacea; palmar erythema; or painlessly the liver is consistent with fatty infiltration. Other early manifestations include respiratory or other infections,

unexplained bruising, periods of amnesia, minor accidents (such as unexplained falls at home), and concerns about human driving skills or arrest or accident related to driving while intoxicated.

Further jaundice ascites, testicular atrophy, gynecomastia and Puytren's contracture. Alcohol abuse destroys a person's life, leads to loss of work, friendship, family disagreements, and other problems.

Course and Result

In a review of 10 major studies, researchers concluded that 2-3% people with an alcohol disorder abstain every year and about 1% returns to asymptomatic or controlled drinking. In 10 studies, 46% -87% of subjects continued to abuse alcohol subsequently; 0% -33% were asymptomatic drinkers; and 8% -39% had abstinence achieved.

In ICD-10 Mental and behavioral disorders due to psychoactive substance use are presented F10-F19

Codes F10 Alcohol related disorders

F11 Opioid related disorders

F12 Cannabis related disorders

F13 Sedative, hypnotic, or anxiolytic related disorders

F14 Cocaine related disorders

F15 Other stimulant related disorders

F16 Hallucinogen related disorders

F17 Nicotine dependence

F18 Inhalant related disorders

F19 Other psychoactive substance related disorder

Four- and five-character codes may be used to specify the clinical conditions, as follows:

F1x.0 Acute intoxication

.00 Uncomplicated

.01 With trauma or other bodily injury

.02 With other medical complications

.03 With delirium

.04 With perceptual distortions

.05 With coma

.06 With convulsions

.07 Pathological intoxication

F1x.1 Harmful use

F1x.2 Dependence syndrome

.20 Currently abstinent

.21 Currently abstinent, but in a protected environment

.22 Currently on a clinically supervised maintenance or replacement regime
[controlled dependence]

- .23 Currently abstinent, but receiving treatment with aversive or blocking drugs
- .24 Currently using the substance [active dependence]
- .25 Continuous use
- .26 Episodic use [dipsomania]
- F1x.3 Withdrawal state
 - .30 Uncomplicated
 - .31 With convulsions
- F1x.4 Withdrawal state with delirium
 - .40 Without convulsions
 - .41 With convulsions
- F1x.5 Psychotic disorder
 - .50 Schizophrenia-like
 - .51 Predominantly delusional
 - .52 Predominantly hallucinatory
 - .53 Predominantly polymorphic
 - .54 Predominantly depressive symptoms
 - .55 Predominantly manic symptoms
 - .56 Mixed
- F1x.6 Amnesic syndrome
- F1x.7 Residual and late-onset psychotic disorder
 - .70 Flashbacks
 - .71 Personality or behaviour disorder
 - .72 Residual affective behaviour
 - .73 Dementia
 - .74 Other persisting cognitive behaviour
 - .75 Late-onset psychotic disorder
- F1x.8 Other mental and behavioural disorders
- F1x.9 Unspecified mental and behavioural disorder

Diagnostic guidelines

Identification of the psychoactive substance used may be made on the basis of self-report data, objective analysis of specimens of urine, blood, etc, or other evidence (presence of drug samples in the patient's possession, clinical signs and symptoms, or reports from informed third parties).

It is always advisable to seek corroboration from more than one source of evidence relating to substance use. Objective analyses provide the most compelling evidence of present or recent use, though these data have limitations with regard to past use and current levels of use. Many drug users take more than one type of drug, but the diagnosis of the disorder should be classified, whenever possible, according to the most important single substance (or class of substances) used. This may usually be done with regard to the particular drug, or type of drug, causing the presenting disorder. When in doubt, code the drug or type of drug most frequently misused, particularly in those cases involving continuous or daily use.

Only in cases in which patterns of psychoactive substance taking are chaotic and indiscriminate, or in which the contributions of different drugs are inextricably mixed, should code F19. – be used (disorders resulting from multiple drug use). Misuse of other than psychoactive substances, such as laxatives or aspirin, should be coded by means of F55. – (abuse of non-dependence-producing substances), with a fourth character to specify the type of substance involved.

Acute intoxication is a transient phenomenon. Intensity of intoxication lessens with time, and effects eventually disappear in the absence of further use of the substance. Recovery is therefore complete except where tissue damage or another complication has arisen. Symptoms of intoxication need not always reflect primary actions of the substance: for instance, depressant drugs may lead to symptoms of agitation or hyperactivity, and stimulant drugs may lead to socially withdrawn and introverted behaviour. Effects of substances such as cannabis and hallucinogens may be particularly unpredictable. Moreover, many psychoactive substances are capable of producing different types of effect at different levels. For example, alcohol may have apparently stimulant effects on behaviour at lower dose levels, lead to agitation and aggression with increasing dose levels, and produce clear sedation at very high levels. Includes: acute drunkenness in alcoholism “bad trips” (due to hallucinogenic drugs) drunkenness.

Differential diagnosis. Consider acute head injury and hypoglycaemia. Consider also the possibilities of intoxication as the result of mixed substance use. The following five-character codes may be used to indicate whether the acute intoxication was associated with any complications:

F1x.00 Uncomplicated Symptoms of varying severity, usually dose-dependent, particularly at high dose levels.

F1x.01 With trauma or other bodily injury.

F1x.02 With other medical complications Complications such as haematemesis, inhalation of vomitus.

F1x.03 With delirium.

F1x.04 With perceptual distortions.

F1x.05 With coma.

F1x.06 With convulsions.

F1x.1 Harmful use A pattern of psychoactive substance use that is causing damage to health. The damage may be physical (as in cases of hepatitis from the self-administration of injected drugs) or mental (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol).

Diagnostic guidelines

The diagnosis requires that actual damage should have been caused to the mental or physical health of the user. Harmful patterns of use are often criticized by others and frequently associated with adverse social consequences of various kinds. The

fact that a pattern of use or a particular substance is disapproved of by another person or by the culture, or may have led to socially negative consequences such as arrest or marital arguments is not in itself evidence of harmful use. Acute intoxication (see F1x.0), or “hangover” is not itself sufficient evidence of the damage to health required for coding harmful use. Harmful use should not be diagnosed if dependence syndrome (F1x.2), a psychotic disorder (F1x.5), or another specific form of drug- or alcohol-related disorder is present.

F1x.2 Dependence syndrome 5 A cluster of physiological, behavioural, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviours that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often strong, sometimes overpowering) to take psychoactive drugs (which may or may not have been medically prescribed), alcohol, or tobacco. There may be evidence that return to substance use after a period of abstinence leads to a more rapid reappearance of other features of the syndrome than occurs with nondependent individuals.

Diagnostic guidelines

A definite diagnosis of dependence should usually be made only if three or more of the following have been present together at some time during the previous year:

- (a) a strong desire or sense of compulsion to take the substance;
- (b) difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use;
- (c) a physiological withdrawal state (see F1x.3 and F1x.4) when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms;
- (d) evidence of tolerance, such that increased doses of the psychoactive substances are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill nontolerant users);
- (e) progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
- (f) persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm.

Narrowing of the personal repertoire of patterns of psychoactive substance use has also been described as a characteristic feature (e.g. a tendency to drink alcoholic drinks in the same way on weekdays and weekends, regardless of social constraints that determine appropriate drinking behaviour). It is an essential characteristic of

the dependence syndrome that either psychoactive substance taking or a desire to take a particular substance should be present; the subjective awareness of compulsion to use drugs is most commonly seen during attempts to stop or control substance use.

This diagnostic requirement would exclude, for instance, surgical patients given opioid drugs for the relief of pain, who may show signs of an opioid withdrawal state when drugs are not given but who have no desire to continue taking drugs.

The dependence syndrome may be present for a specific substance (e.g. tobacco or diazepam), for a class of substances (e.g. opioid drugs), or for a wider range of different substances (as for those individuals who feel a sense of compulsion regularly to use whatever drugs are available and who show distress, agitation, and/or physical signs of a withdrawal state upon abstinence).

The diagnosis of the dependence syndrome may be further specified by the following five-character codes:

F1x.20 Currently abstinent.

F1x.21 Currently abstinent, but in a protected environment (e.g. in hospital, in a therapeutic community, in prison, etc.).

F1x.22 Currently on a clinically supervised maintenance or replacement regime [controlled dependence] (e.g. with methadone; nicotine gum or nicotine patch)

F1x.23 Currently abstinent, but receiving treatment with aversive or blocking drugs (e.g. naltrexone or disulfiram).

F1x.24 Currently using the substance [active dependence].

F1x.25 Continuous use.

F1x.26 Episodic use [dipsomani].

F1x.3 Withdrawal state A group of symptoms of variable clustering and severity occurring on absolute or relative withdrawal of a substance after repeated, and usually prolonged and/or highdose, use of that substance. Onset and course of the withdrawal state are time-limited and are related to the type of substance and the dose being used immediately before abstinence. The withdrawal state may be complicated by convulsions. Diagnostic guidelines Withdrawal state is one of the indicators of dependence syndrome (see F1x.2) and this latter diagnosis should also be considered. Withdrawal state should be coded as the main diagnosis if it is the reason for referral and sufficiently severe to require medical attention in its own right. Physical symptoms vary according to the substance being used. Psychological disturbances (e.g. anxiety, depression, and sleep disorders) are also common features of withdrawal. Typically, the patient is likely to report that withdrawal symptoms are relieved by further substance use. It should be remembered that withdrawal symptoms can be induced by conditioned/learned stimuli in the absence of immediately preceding substance use. In such cases a diagnosis of withdrawal state should be made only if it is warranted in terms of severity.

Differential diagnosis. Many symptoms present in drug withdrawal state may also be caused by other psychiatric conditions, e.g. anxiety states, and depressive disorders. Simple “hangover” or tremor due to other conditions should not be confused with the symptoms of a withdrawal state. The diagnosis of withdrawal state may be further specified by using the following five-character codes: F1x.30 Uncomplicated F1x.31 With convulsions F1x.4 Withdrawal state with delirium A condition in which the withdrawal state (see F1x.3) is complicated by delirium (see criteria for F05).

A psychotic disorder occurring during or immediately after drug use (usually within 48 hours) should be recorded here provided that it is not a manifestation of drug withdrawal state with delirium (see F1x.4) or of late onset. Late-onset psychotic disorders (with onset more than 2 weeks after substance use) may occur, but should be coded as F1x.75. Psychoactive substance-induced psychotic disorders may present with varying patterns of symptoms. These variations will be influenced by the type of substance involved and the personality of the user. For stimulant drugs such as cocaine and amphetamines, drug-induced psychotic disorders are generally closely related to high dose levels and/or prolonged use of the substance. A diagnosis of psychotic disorder should not be made merely on the basis of perceptual distortions or hallucinatory experiences when substances having primary hallucinogenic effects (e.g. lysergic (LSD), mescaline, cannabis at high doses) have been taken. In such cases, and also for confusional states, a possible diagnoses of acute intoxication (F1x.0) should be considered. Particular care should also be taken to avoid mistakenly diagnosing a more serious condition (e.g. schizophrenia) when a diagnosis of psychoactive substance-induced psychosis is appropriate. Many psychoactive substance-induced psychotic states are of short duration provided that no further amounts of the drug are taken (as in the case of amphetamine and cocaine psychoses). False diagnosis in such cases may have distressing and costly implications for the patient and for the health services. Includes: alcoholic hallucinosis alcoholic jealousy alcoholic paranoia alcoholic psychosis NOS Differential diagnosis. Consider the possibility of another mental disorder being aggravated or precipitated by psychoactive substance use (e.g. schizophrenia (F20); mood [affective] disorder (F30 - F39); paranoid or schizoid personality disorder (F60.0, F60.1). In such cases, a diagnosis of psychoactive substance-induced psychotic state may be inappropriate.

The diagnosis of psychotic state may be further specified by the following fivecharacter codes:

F1x.50 Schizophrenia-like.

F1x.51 Predominantly delusional.

F1x.52 Predominantly hallucinatory (includes alcoholic hallucinosis).

F1x.53 Predominantly polymorphic.

F1x.54 Predominantly depressive symptoms.

F1x.55 Predominantly manic symptoms.

F1x.56 Mixed.

F1x.6 Amnesic syndrome.

A syndrome associated with chronic prominent impairment of recent memory; remote memory is sometimes impaired, while immediate recall is preserved. Disturbances of time sense and ordering of events are usually evident, as are difficulties in learning new material. Confabulation may be marked but is not invariably present. Other cognitive functions are usually relatively well preserved and amnesic defects are out of proportion to other disturbances.

Diagnostic guidelines

Amnesic syndrome induced by alcohol or other psychoactive substances coded here should meet the general criteria for organic amnesic syndrome (see F04).

The primary requirements for this diagnosis are:

- (a) memory impairment as shown in impairment of recent memory (learning of new material); disturbances of time sense (rearrangements of chronological sequence, telescoping of repeated events into one, etc.);
- (b) absence of defect in immediate recall, impairment of consciousness, and of generalized cognitive impairment;
- (c) history or objective evidence of chronic (and particularly high-dose) use of alcohol or drugs.

Personality changes, often with apparent apathy and loss of initiative, and a tendency towards self-neglect may also be present, but should not be regarded as necessary conditions for diagnosis. Although confabulation may be marked it should not be regarded as a necessary prerequisite for diagnosis. Includes: Korsakov's psychosis or syndrome, alcohol- or other psychoactive substance-induced.

Differential diagnosis

Consider: organic amnesic syndrome (nonalcoholic) (see F04); other organic syndromes involving marked impairment of memory (e.g. dementia or delirium) (F00 - F03; F05; a depressive disorder (F31 – F33). F1x.7 Residual and late-onset psychotic disorder A disorder in which alcohol- or psychoactive substance-induced changes of cognition, affect, personality, or behaviour persist beyond the period during which a direct psychoactive substance-related effect might reasonably be assumed to be operating.

Diagnostic guidelines Onset of the disorder should be directly related to the use of alcohol or a psychoactive substance. Cases in which initial onset occurs later than episode(s) of substance use should be coded here only where clear and strong evidence is available to attribute the state to the residual effect of the substance. The disorder should represent a change from or marked exaggeration of prior and normal state of functioning. The disorder should persist beyond any period of time

during which direct effects of the psychoactive substance might be assumed to be operative (see F1x.0, acute intoxication).

Alcohol- or psychoactive substance-induced dementia is not always 10 irreversible; after an extended period of total abstinence, intellectual functions and memory may improve. The disorder should be carefully distinguished from withdrawal-related conditions (see F1x.3 and F1x.4). It should be remembered that, under certain conditions and for certain substances, withdrawal state phenomena may be present for a period of many days or weeks after discontinuation of the substance.

Conditions induced by a psychoactive substance, persisting after its use, and meeting the criteria for diagnosis of psychotic disorder should not be diagnosed here (use F1x.5, psychotic disorder). Patients who show the chronic end-state of Korsakov's syndrome should be coded under.

F1x.6. Differential diagnosis

Consider: pre-existing mental disorder masked by substance use and re-emerging as psychoactive substance-related effects fade (for example, phobic anxiety, a depressive disorder, schizophrenia, or schizotypal disorder). In the case of flashbacks, consider acute and transient psychotic disorders (F23). Consider also organic injury and mild or moderate mental retardation (F70 – F71), which may coexist with psychoactive substance misuse.

This diagnostic rubric may be further subdivided by using the following five-character codes:

F1x.70 Flashbacks May be distinguished from psychotic disorders partly by their episodic nature, frequently of very short duration (seconds or minutes) and by their duplication (sometimes exact) of previous drug-related experiences.

F1x.71 Personality or behaviour disorder Meeting the criteria for organic personality disorder (F07.0).

F1x.72 Residual affective disorder Meeting the criteria for organic mood [affective] disorders (F06.3).

F1x.73 Dementia Meeting the general criteria for dementia as outlined in the introduction to F00 - F09.

F1x.74 Other persisting cognitive impairment A residual category for disorders with persisting cognitive impairment, which do not meet the criteria for psychoactive substance-induced amnesic syndrome (F1x.6) or dementia

F1x.75 Late-onset psychotic disorder.

F1x.8 Other mental and behavioural disorders Code here any other disorder in which the use of a substance can be identified as contributing directly to the condition, but which does not meet the criteria for inclusion in any of the above disorders.

F1x.9 Unspecified mental and behavioural disorder.

SCREENING

The CRAFFT Screening Tool

The CRAFFT is a behavioral health screening tool for use with children under the age of 21 and is recommended by the American Academy of Pediatrics' Committee on Substance Abuse for use with adolescents. It consists of a series of 6 questions developed to screen adolescents for high risk alcohol and other drug use disorders simultaneously. It is a short, effective screening tool meant to assess whether a longer conversation about the context of use, frequency, and other risks and consequences of alcohol and other drug use is warranted.

Screening using the CRAFFT begins by asking the adolescent to Please answer these next questions honestly; telling him/her Your answers will be kept confidential; and then asking three opening questions.

If the adolescent answers No to all three opening questions, the provider only needs to ask the adolescent the first question the CAR question. If the adolescent answers Yes to any one or more of the three opening questions, the provider asks all six CRAFFT questions.

CRAFFT is a mnemonic acronym of first letters of key words in the six screening questions. The questions should be asked exactly as written.

- C - Have you ever ridden in a CAR driven by someone (including yourself) who was high or had been using alcohol or drugs?
- R - Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?
- A - Do you ever use alcohol/drugs while you are by yourself, ALONE?
- F - Do you ever FORGET things you did while using alcohol or drugs?
- F - Do your families or FRIENDS ever tell you that you should cut down on your drinking or drug use?
- T - Have you gotten into TROUBLE while you were using alcohol or drugs?

A pocket card with the CRAFFT questions is available for clinical use: CRAFFT card request. All cards are printed on a bright red, laminated 4"x 5" card.

A self-administered version of the CRAFFT is available in English and several other languages: Self-administreted CRAFFT Screening Questions.

Opioid Risk Tool

This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse, and a score of 8 or higher indicates a high risk for opioid abuse.

Mark each box that applies	Female	Male
Family history of substance abuse		
Alcohol	1	3
Illegal drugs	2	3
Rx drugs	4	4
Personal history of substance abuse		
Alcohol	3	3
Illegal drugs	4	4
Rx drugs	5	5
Age between 16 - 45 years	1	1
History of preadolescent sexual abuse	3	0
Psychological disease		
ADD, OCD, bipolar, schizophrenia	2	2
Depression	1	1
Scoring totals		

Questionnaire developed by Lynn R. Webster, MD to assess risk of opioid addiction.

Webster LR, Webster R. Predicting aberrant behaviors in Opioid-treated patients: preliminary validation of the Opioid risk tool. Pain Med. 2005; 6 (6) : 432

NIDA Quick Screen V1.0F

Name:

Sex () F () M

Age.....

Interviewer.....

Date/...../.....

Introduction (Please read to patient)

Hi, I'm _____, nice to meet you. If it's okay with you, I'd like to ask you a few questions that will help me give you better medical care. The questions relate to your experience with alcohol, cigarettes, and other drugs. Some of the

substances we'll talk about are prescribed by a doctor (like pain medications). But I will only record those if you have taken them for reasons or in doses other than prescribed. I'll also ask you about illicit or illegal drug use - but only to better diagnose and treat you.

Instructions: For each substance, mark in the appropriate column. For example, if the patient has used cocaine monthly in the past year, put a mark in the "Monthly" column in the "illegal drug" row.

NIDA Quick Screen Question: In the past year, how often have you used the following?

Never Once or Twice Monthly Weekly Daily or Almost Daily Alcohol;

- For men, 5 or more drinks a day;
- For women, 4 or more drinks a day Tobacco Products Prescription Drugs for Non-Medical Reasons Illegal Drugs;

If the patient says "NO" for all drugs in the Quick Screen, reinforce abstinence. Screening is complete;

If the patient says "Yes" to one or more days of heavy drinking, patient is an at-risk drinker. Please see NIAAA website "How to Help Patients Who Drink Too Much: A Clinical Approach"

http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm, for information to Assess, Advise, Assist, and Arrange help for at risk drinkers or patients with alcohol use disorders;

If patient says "Yes" to use of tobacco: Any current tobacco use places a patient at risk. Advise all tobacco users to quit. For more information on smoking cessation, please see "Helping Smokers Quit: A Guide for Clinicians" <http://www.ahrq.gov/clinic/tobacco/clnhlpsmksqt.htm>;

If the patient says "Yes" to use of illegal drugs or prescription drugs for non-medical reasons, proceed to Question 1 of the NIDA-Modified ASSIST.

Cannabis-Related Disorders

Cannabis-related disorders can result from use of *Cannabis sativa*, commonly referred to as marijuana, weed, pot, herb, grass, and reefer. The active ingredient is delta-9-tetrahydrocannabinol (THC). *Cannabis sativa* contains varying amounts of THC, but in general plants today have much higher THC concentrations than in the past. *Cannabis* is a generic term that also refers to other forms including synthetic cannabinoid compounds. Synthetic oral formulations are available by prescription for medical indications in some areas, and there is a growing movement in the United States and Europe to decriminalize possession of small amounts of marijuana, or even to legalize its use.

In DSM-5, diagnoses include cannabis intoxication, cannabis withdrawal, and cannabis use disorder. *Cannabis withdrawal* is a new diagnosis based on research showing that the syndrome can be reliably identified and has a time course typical of other substance withdrawal syndromes. Diagnosis of a cannabis use disorder requires 2 or more of 11 problematic behaviors occurring within a 12-month

period. The symptoms include a pattern of use; craving; and impaired social, occupational, or recreational functioning, as well as evidence of tolerance or withdrawal.

Marijuana gained popularity in the drug subculture in the 1960s and 1970s and remains the most widely used illicit drug in the United States. Although marijuana use is often considered relatively mild, it is often found in people with other mental disorders and is associated with an increased risk of schizophrenia. Cannabis use is also associated with an increased risk of cigarette smoking and other drug abuse.

Cannabis has diverse effects on the brain, prominent among which are actions on CB₁ and CB₂ cannabinoid receptors found throughout the central nervous system. Commonly smoked (in the form of a joint, cannabis is sometimes ingested orally by mixing it into food. Also, devices have been developed in which cannabis is vaporized. When marijuana is smoked, intoxication occurs within 10 - 30 minutes. THC and its metabolites is lipid soluble and accumulate in fat cells; the half-life is approximately 50 hours. Intoxication can last 2 - 4 hours, depending on the dosage, although behavioral changes may continue for many hours. Oral ingestion (e.g. from adding marijuana to baked goods) produces a slower onset of action but leads to more powerful intoxicant effects.

The use of cannabis leads to a feeling of euphoria and serenity, increased appetite and thirst, dizziness, increased confidence in oneself. In addition, users also report that time has slowed down. Adverse effects include conjunctivitis (red eyes), tachycardia, dry mouth (cotton mouth), and coughing attacks. There is a similarity between the effects of marijuana and LSD, such as the development of perceptual distortions, sound sensitivity and a sense of unity with the environment. In addition, feelings of anxiety and paranoia (for example, increased alertness, suspicion), impaired attention, and decreased coordination of movements may develop. Marijuana rarely causes a dangerous psychological or physical reaction. But marijuana impairs the transfer of material from immediate to long-term memory. Electroencephalographic studies show suppression of fast eye movements (REM) and diffuse slowdown of background activity. However difficult highlight the independent effects of marijuana, because many of its regular users also take other drugs.

Cannabis withdrawal is characterized by irritability and nervousness, insomnia, poor appetite, anxiety and depressed mood. Physical symptoms may include tremors, sweating, fever, chills, and headache.

Professional help is usually not required to treat the side effects of marijuana. Benzodiazepines (e.g. diazepam) can help calm very anxious users. There is no specific treatment for withdrawal, but supportive measures can help (for example, the temporary use of anxiolytic, hypnotics, or non-steroidal anti-inflammatory drugs).

Hallucinogen-Related Disorders

Hallucinogens have been used for millennia and in many cultures. This is a diverse group of compounds, the most synthetic, but two (peyote, mescaline) of botanical origin. The most famous probably LSD (lysergic acid diethylamide), mescaline, MDMA (3,4-methylenedioxyamphetamine) and psilocybin. In DSM-5 Phencyclidine (PCP), known as angel dust or crystal, is included in class because it's a widely used hallucinating drug with hallucinogenic properties. These drugs can induce hallucinations, perceptual disturbances, and feelings of unreality. Some persons believe that hallucinogens bring them closer to God or can expand their minds. The drugs became popular in the late 1960s and early 1970s when "psychedelic" experiences were romanticized and self-styled drug gurus such as the late Timothy Leary advocated their use. Because they are sympathomimetics, hallucinogens can cause tachycardia, hypertension, sweating, blurry vision, pupillary dilation, and tremors. They affect several neurotransmitter systems, including the dopamine, serotonin, acetylcholine, and γ -aminobutyric acid (GABA) systems. Tolerance develops rapidly to the euphoric and psychedelic effects of hallucinogens. The hallucinogens differ in quality and duration of their subjective effects. As the prototype, LSD is short acting and rapidly absorbed. Onset of action occurs within an hour of ingestion, and effects last between 6 and 12 hours. In addition to autonomic hyperarousal, the drug causes varied psychological effects, including profound alterations in perception (e.g., colors may be experienced as brighter and more intense), and senses appear heightened. Emotions seem to intensify, and many users report becoming more introspective. Many users claim that their use leads to spiritual and philosophical insight. In fact, these properties led psychiatrists to experiment with LSD and other hallucinogens in the early 1960s for therapeutic purposes, such as to facilitate communication, improve insight, and increase self-esteem. Sometimes there are "bad trips" in which when consumers become anxious or paranoid. Another negative effect is the memory, brief re-examination of the effects of the drug that occur in situations where long before taking the drug. Memories consist of visual distortions, geometric hallucinations and delusions. Memories that evoke marked distress is diagnosed as hallucinogen derivative The disorder is usually self-limiting, but can become chronic rare cases.

Chronic psychoses occur in some consumers of hallucinogen, and it was once thought that they could cause schizophrenia. Although these drugs can cause psychotic episodes in some people, it is likely that users who have developed schizophrenia would have developed without the use of hallucinogen. New "designer" drugs grew in popularity during the past decade, especially methylenedioxyamphetamine (MDMA), better known as ecstasy. Mainly used by youth and young people, this is the first appeared on the "raves" around 1995, happens due to its acute enhancing effects. Evokes a strong feeling affection and communication with others and high energy which makes users feel like they can dance all night or all day long. Other effects include altered perceptions of time, a sense of peace, euphoria, increased sexuality and increased sensory perception.

Drug may also lead to anxiety, depression, and psychosis. In addition, cognitive and memory deficiency with regular drug use.

Withdrawal syndrome not described but Benzodiazepines can be used to help reassure users. An overdose can lead to emergency care. Hyperthermia, Tachycardia, arrhythmia, stroke, dehydration or even death can result.

PCP can be administered in several different ways (e.g., orally, internally venous, intranasal). The effect occurs 5 minutes after administration and reaches a peak after about 30 minutes. Users report euphoria, derealization, tingling sensations and warmth. In moderate dosages, strange behavior can occur, along with myoclonic jerks, confusion and disorientation. Higher doses can lead to coma and cramps. Death comes as a result of respiratory depression. PCP may also cause cognitive deficit. Treatment may be required for adverse reactions. Diazepam may be used to treat agitation, but serious behavioral disorders may require use of a short-term antipsychotic, preferably with a relative absence anticholinergic side effects (e.g. haloperidol, risperidone). Phentolamine or other antihypertensive drugs can be used to lower high blood pressure. Ammonium chloride can be used to acidify urine for Discontinue the drug, although its use is usually not required.

Inhalant-Related Disorders

Inhalants are the cheapest and most readily available of the various substances of abuse. Paint thinner, airplane glue, and typewriter correction fluid are just a few of the inhalants that are commonplace. The active substances in the inhalants include toluene, acetone, benzene, and other organic hydrocarbons. Methods of inhalation may vary, but usually a substance is sprayed into a plastic bag and inhaled. Inhalants are dangerous because they can damage the CNS, liver, kidneys, and bone marrow. They enter the bloodstream quickly and have rapid onset of action. An inhalant use disorder is defined by the problematic use of a hydrocarbon-based inhalant. Diagnosis requires 2 or more of 11 problematic behaviors occurring within a 12-month period. The symptoms include a pattern of use; craving; and impaired social, occupational, or recreational functioning, as well as evidence of tolerance or withdrawal.

DSM-5 also includes other inhalant substances that may produce inhalant use disorder: nitrous oxide gas, which is available as a propellant in whipped cream dispensers or diverted from medical or dental sources, and amyl, butyl, and isobutyl nitrate gases, which are sold as room deodorizers and are inhaled to enhance sexual experience. Inhalation of these gases produces peripheral lightheadedness, vasodilatation, and headache. The disorder is more common in adolescents, perhaps because inhalants are widely available and inexpensive. The use of volatile solvents is widespread and it is believed that 1 out of 10 people under the age of 17 experimented with them. Because they are widely available and cheap, inhalants are mainly used young people who find it difficult to access other psychoactive substances.

Mostly male users of inhalants. In the USA, Latinos and Native Americans predominantly represented among inhaled users. Although experimenting with Inhalants are extremely common, regular use is found mainly among persons with hereditary burden, with low material income and in dysfunctional families. Inhalants are central nervous system depressants and cause intoxication similar to alcohol effect, but shorter duration. Effects can last 5-45 minutes and include feelings of arousal, disinhibition and euphoria. Adverse This is dizziness, slurred speech and ataxia.

Inhalants can also because acute delirium characterized by impaired concentration and disorientation. Hallucinations and delusions have been reported since their use. Other effects include loss of appetite, lateral nystagmus, reactive reflexes and double vision. At higher dosages, patient's may become dull or comatose.

The withdrawal syndrome is not expressed, however, inhalants often contain high concentrations of heavy metals, constant damage to the neuromuscular system and brain can occur, as well as a serious risk damage to the kidneys, liver and other organs from benzene, etc. hydrocarbons.

Opioid-Related Disorders

Opioids include natural and synthetic substances with morphine. as actions that are complete opioid receptor agonists. It morphine, heroin, hydrocodone, oxycodone, codeine, and tramadol Hydromorphone. Opioids are prescribed as analgesics, painkillers, antidiarrheumatic and cough suppressants. Buprenorphine, a drug that has

both opiate agonist and antagonist effects are also included in this class. Besides heroin, opium is the most widely used illegal opiate in Peace. In the USA, non-medical use of prescription opioids this is a serious problem.

Opioid users are highly likely to develop opioid use disorders and are at increased risk of contracting HIV as well as like hepatitis B and C. viruses. Opioid abuse is more common among urban residents and is more common in men and blacks. Among those who abuse prescription Painkillers have a slight female advantage. Opioid abuse common among medical professionals, probably due to the availability of these drugs in medical settings.

More than five times as many people abuse prescription painkillers like heroin. Many opioid addicts have other mental illnesses, including other drug addiction, mood or anxiety disorder or asocial personality disorder.

The prognosis and outcomes of opioid dependence are variable and Depends on the availability of the drug and its susceptibility to use. At 12 years' old monitoring patients with opioid dependence who received treatment as part of federal treatment center, 98% returned to opioid use within 12 months of release. Following A low study in London showed a relapse rate of 53% over 6 months. California Drug Surveillance 24 Years confirmed that drug abuse years and cessation of drug use were rare.

Nonetheless, a study of military veterans who used opioids in Vietnam found that less than 2% continued to use them after returning home. These discrepancies and findings suggest that there may be more than one type of opioid user. Opioid dependence is associated with a high mortality rate because unintentional fatal overdoses, accidents and suicides.

Opioid users should be carefully monitored because they can have concomitant pathology. Opioid users are also at high risk development of disorders resulting from malnutrition and use dirty needles - for example, hepatitis B and C, HIV infection, pneumonia, skin ulcers at injection sites and cellulite.

Opioids can be administered, sniffed or smoked, producing a high and a sense of well-being. Drowsiness, inaction, psychomotor deceleration and impaired concentration follow. Physical symptoms that occur after the heroin addict shoots (what can happen three or more than once a day) include flushing, narrowing of the pupil, slurred speech, respiratory depression, hypotension, hypothermia and cardiac. Constipation, nausea and vomiting are also common.

Tolerance eventually develops for most of these drug effects, including initial euphoria. Sexual interest decreases, while in women menstruation may stop. In chronic users, depending on the dosage and drug potency, withdrawal symptoms begin about 10 hours' after last dose with short-acting opioids (e.g. morphine, heroin) or after a longer period with substances of a longer action (for example, methadone). Minor withdrawal symptoms include lacrimation, rhinorrhea, sweat itching, yawning, piloerection, hypertension and tachycardia.

Symptoms that indicate more severe withdrawal include hot and cold flashes, muscle and joint pain, nausea, vomiting, and abdominal cramps. Seizures sometimes occur during meperidine withdrawal. Psychological symptoms of withdrawal include severe anxiety and restlessness, irritability, insomnia, and decreased appetite.

Patients addicted to opioids can be gradually withdrawn under medical supervision using methadone, a long-acting opioid. Importantly, methadone can be administered only in inpatient or outpatient settings federally licensed for methadone detoxification. The initial methadone dosage is determined by the presenting signs and symptoms of withdrawal. The dose is then repeated in 12 hours, and supplemental doses of 5 mg or 10 mg are given as needed if withdrawal symptoms are not suppressed.

Once the 24-hour dosage is determined, the dosage is tapered at the rate of 20 % per day for short-acting opioids or 10 % per day for long-acting opioids. Methadone can be given in two to three divided doses daily, and the patient's vital signs should be recorded before each dose. It is unusual for a starting dose to exceed 40 mg during the initial 24 hours of withdrawal. Withdrawal from short-acting substances (e.g. heroin, morphine) typically takes 7-10 days. Withdrawal from longer-acting substances (e.g. methadone) proceeds more slowly (e.g. 2 - 3 weeks).

Another drug used to withdraw patients from opioids is clonidine, which suppresses the autonomic signs of withdrawal. Patients do better with an abrupt

switch to clonidine when the methadone dosage is first stabilized at 20 mg or less daily. At the first sign of opioid withdrawal, the patient is given 0.3 - 0.5 mg (0.006 mg/kg) of clonidine, which is repeated at bedtime. For the next 4 days, the patient receives 0.9 - 1.5 mg/day in three to four divided doses. The dose should be withheld if the diastolic blood pressure falls below 60 mm Hg or marked sedation occurs. On days 6 - 8, the dosage can be decreased by 50 %, and on day 9, clonidine can be discontinued altogether. For long-acting opioids, clonidine reduction should occur on days 11 - 14, with discontinuation on day 15.

In the treatment of mild cases of withdrawal syndrome, benzodiazepines are used to relieve anxiety and normalize sleep. Mild analgesics, such as non-steroidal anti-inflammatory drugs, may relieve muscle aches and pains. Gastrointestinal Disorders Can Be Treated with dicyclomine.

If the patient is also addicted to a sedative, hypnotic, or anxiolytic drug in addition to an opioid, it is safest to stabilize the patient on a dosage of methadone and then withdraw the sedative, hypnotic, or anxiolytic first, because withdrawal from such drugs is potentially the more dangerous syndrome.

Participation in a federally licensed methadone maintenance program continues to be the major alternative to complete cessation of use. In such a program, methadone is administered orally (e.g. 60 - 100 mg/day). Because of its long half-life (22 - 56 hours) and its wide distribution in the body, the drug is well tolerated and produces almost no withdrawal symptoms. The rationale for methadone maintenance is that by switching addicted persons to methadone, their drug hunger is alleviated so that they are less preoccupied with drug-seeking behavior. This approach has been successful, and most people enrolled in these programs have significant decreases in opioid and nonopioid drug use, criminal activity, and depressive symptoms. They also show an increase in paid work and stability in social relations. At the same time, methadone is more likely to be a transitional treatment that ultimately leads to complete abstinence, and at least one well-planned study. showed methadone maintenance programs produce better than detoxification. Methadone programs also include individual and group psychotherapy. It helps keep addicted people in the program and gives new skills to help them deal with everyday the problems of a day without drugs.

Methadone programs are not a panacea; they are essentially a variant of palliative medicine. Naloxone, a long-acting opioid antagonist, is approved by the FDA for the treatment of opioids. The drug usually begins after discontinuation of the drug, in dosages of 50-100 mg / day or 100-150 mg three times a week. Its use designed to block the pleasant effects of opioid drugs, thereby. Their use is less attractive.

Buprenorphine (Subutex) - mixed Opioid antagonist agonist and combination of uprenorphine and naloxone (Suboxone) is approved by the FDA for the treatment of opioid dependence. The use of these agents is limited to specially trained octors who meet certain requirements.

Tobacco-Related Disorders

Nicotine is a highly addictive drug found in cigarettes, chewing tobacco, snuff, and other tobacco products. More than 20 % of adult Americans smoke, although smoking is even more frequent in certain groups (e.g. minority groups, low-income persons, less-educated persons). Rates among psychiatric patients are also very high. For example, alcohol- or drug-abusing patients are highly likely to smoke, and nearly 90 % patients with schizophrenia smoke too.

Smoking cause lung cancer, emphysema, and cardiovascular disease. Snuff and chewing tobacco have been associated with oropharyngeal cancers. Secondary smoke has been associated with respiratory and cardiovascular diseases. Nicotine addiction develops quickly and is often reinforced by peer pressure. But in the past few decades, society has changed its views on smoking, and fewer people now take up smoking.

Nicotine withdrawal begins within 1 hour after the last cigarette is smoked and peaks within 24 hours. Withdrawal may last weeks or months and includes nicotine craving, anxiety, restlessness, irritability, decreased heart rate, weight gain and depression.

Based on the fact that tobacco use is so potentially harmful, all physicians have a responsibility to urge their patients not to use tobacco products and to assist patients who do use them to quit. There are several FDA-approved treatments for smoking cessation such as nicotine transdermal patches and nicotine-containing gum, lozenges, and inhalers; proven anti-nicotine drugs - Bupropion, an antidepressant marketed as Zyban; and Varenicline (Chantix or Champix), a newer option that may be more effective than nicotine replacement or bupropion. The combination of nicotine-replacement patches or gum with bupropion or varenicline may work even better.

Clinical Management of Substance-Related Disorders

Treatment for drug-related disorders consists of two stages. First of all - detoxification and secondly, continued treatment or rehabilitation. Detoxification can be difficult to achieve in some patients, such as with potentially serious withdrawal symptoms (e.g., users biturates or opioids), but may be easier with others whose medicines abuse (e.g. hallucinogens) do not have a specific withdrawal syndrome. Hospitalization is indicated for safe detoxification in some patients, therefore that tolerance can be determined and the slow taper of the drug can be tracked Torad under the supervision of a doctor. Detoxification circumstances must be determined by the patient and the doctor working together.

Alcohol-related disorders often require medical intervention. Intoxication is the most common disorder and rarely requires more than simple supportive measures, such as decreasing external stimuli and removing the source of alcohol. But intensive care may be required when respiration is compromised. Treatment of alcohol withdrawal depends on the syndrome that develops. Importantly, while withdrawal symptoms typically follow the abrupt cessation of alcohol

consumption, they can also develop when users simply reduce their usual high intake.

Uncomplicated alcohol withdrawal (the "shakes") begins 12-18 hours after the cessation of drinking and peaks at 24-48 hours, then sub-sides within 5-7 days, even without treatment. Minor symptoms include anxiety, tremors, nausea and vomiting; elevated level heart rate and blood pressure.

Alcoholic withdrawal seizures ("rum fits") occur 7-38 hours after the cessation of drinking and peak between 24 and 48 hours. The patient may have a single burst of one to six generalized seizures; status epilepticus is rare. Withdrawal seizures occur primarily as a consequence of severe, long-term alcohol misuse.

Alcoholic hallucinosis—vivid and unpleasant auditory, visual, or tactile hallucinations—begins within 48 hours of cessation of drinking and occurs in the presence of a clear sensorium. The hallucinations typically last about 1 week but can become chronic. Like withdrawal seizures, they are a sign of severe alcohol misuse. Alcohol withdrawal delirium (delirium tremens, or "DTs") occurs in about 5% of hospitalized alcoholic patients but in about one-third of those with withdrawal seizures. Symptoms include confusion, agitation, perceptual disturbance mild fever, and autonomic hyperarousal. The delirium begins 2-3 days after the drinking stops or after a significant reduction of intake and peaks 4 or 5 days later. Death is rare, although mortality rates of 15% were reported in the past.

Specialists should always ask patients to describe their past symptoms that had developed when they either stopped drinking or cut back from their usual heavy drinking. The most common symptoms reported are mild tremors; far fewer will have had seizures, hallucinations, or delirium tremens. Some patients will misidentify their shakes as "DTs".

Stopping of alcohol withdrawal consists of general support (i.e., adequate food and hydration, careful medical monitoring), nutritional supplementation, and the use of benzodiazepines.

Patients with history of uncomplicated withdrawal and have a physician who is familiar with the patient can be managed as outpatients. Treatment may use chlordiazepoxide (25-50 mg four times daily), tapered slowly over the next 4-5 days.

Those with comorbid medical conditions or mental disorders, low compliance, inadequate or absent social support, or a history of severe withdrawal symptoms will require careful monitoring and may need to be hospitalized. Patients should receive an adequate diet plus oral thiamine (100 mg), folic acid (1 mg), and multivitamins. Thiamine (100-200 mg intramuscularly) can be administered if oral intake is not possible and should be given before any situation in which glucose loading is required, because glucose can deplete thiamine stores.

Chlordiazepoxide should be administered in dosages ranging from 25 to 100 mg orally four times daily on the first day, with a 20% per day decrease in dosage over 4- 5 days. Additional doses can be given for breakthrough signs or symptoms (e.g., tremors or diaphoresis). The 10-item Clinical Institute Withdrawal Assessment (CIWA) is an objective rating scale that can be used to assess the dynamics the withdrawal state.

Chlordiazepoxide and the other benzodiazepines are the preferred drugs for withdrawal because of their safety and cross-tolerance with alcohol. Chlordiazepoxide is most often recommended because of its long half-life and low cost, but other benzodiazepines work just as well. Intermediate- or short-acting benzodiazepines (e.g., lorazepam, oxazepam) are generally preferred in patients with liver damage or in elderly patients because these benzodiazepines lack metabolites and are renally excreted.

Diazepam can be given to interrupt seizures should status epilepticus occur. Other drugs, including carbamazepine, clonidine, propranolol, and valproate, have been used to treat alcohol withdrawal, but their role in treating the disorder is not yet clear.

Management of alcohol withdrawal syndromes

1. Chlordiazepoxide protocol
 - 50 mg every 4 hours' x 24 hours, then
 - 50 mg every 6 hours' x 24 hours, then
 - 25 mg every 4 hours' x 24 hours, then
 - 25 mg every 6 hours' x 24 hours

The protocol should be started when 3 of the following 7 parameters are met: systolic blood pressure >160 mm Hg, diastolic blood pressure >100 mm Hg, pulse >110 beats/min, temperature >38.3°C, nausea, vomiting, or tremors. The dose should be held if any of the following signs are present: nystagmus, sedation, ataxia, slurred speech, or the patient is asleep.

2. Thiamine: 50-100 mg orally or intramuscularly x 1; folic acid: 1 mg/day orally
3. Haloperidol: 2-5 mg/day; or risperidone: 2-6 mg/day for patients with alcoholic hallucinosis
4. For delirium tremens: 10 mg of intravenous diazepam (or 2-4 mg of lorazepam), followed by 5-mg doses (or 1-2 mg of lorazepam) every 5-15 minutes until calm; once stabilized, the dosage may be tapered slowly over 4 or 5 days

Seclusion and restraints as necessary

- Adequate hydration and nutrition

Delirious patients require additional care; this may include seclusion and restraints. To facilitate patient care, 10 mg of intravenous diazepam (or 2-4 mg of lorazepam) may be given, followed by 5-mg doses every 5-15 minutes (or 1-2 mg of lorazepam) thereafter until the patient is calm. Once the patient has stabilized, the benzodiazepine dosage should be tapered slowly over the next 4 or 5 days. Intravenous hydration also may be necessary, although most alcoholic patients are overhydrated, not dehydrated, as is commonly believed. Any electrolyte disturbance should be corrected, and the patient should be examined for injuries or evidence of a physical illness (e.g., pneumonia). Haloperidol (2-5 mg/day) or one of the second-generation antipsychotics (e.g., risperidone, 2-6 mg/day) may help relieve the frightening hallucinations of the patient with alcoholic hallucinosis. The medication usually is discontinued when the hallucinations stop.

Rehabilitation follows the alcohol detoxification process.

There are two goals: 1) that the patient remains sober, and 2) that coexisting disorders

be identified and treated. Perhaps two-thirds of these patients have additional mental disorders (including mood or anxiety disorders) and will benefit from their treatment. Because an alcohol use disorder itself can cause depression and most alcohol-induced depressions lift with sobriety, antidepressants are probably needed only for patients who remain depressed after 2-4 weeks of sobriety.

As a first step, the patient should be told that his or her disorder is significant and potentially life-threatening. Receiving a diagnosis may be the single most important step in leading to change. Patients should be encouraged to attend Alcoholics Anonymous (AA), a worldwide self-help group for recovering alcoholic persons founded in 1935. AA uses a program of 12 steps; new members are asked to admit their problems, to give up a sense of personal control over the disease, to make personal amends, and to help others to achieve sobriety. The meetings provide a blend of acceptance, belonging, forgiveness, and understanding. A team approach is used for hospitalized patients. Group therapy enables patients to see their own problems mirrored in others and to learn better coping skills. With individual therapy, the person can learn to identify triggers that prompt drinking and learn more effective coping strategies. Family therapy is often important because the family system that has been altered to accommodate the person's drinking may end up reinforcing it. These issues can be addressed in family therapy. Inpatient programs also provide education about the harmful effects of alcohol.

Motivational interviewing is being increasingly used to help persuade patients to make their own case for change (i.e., to abandon alcohol). Avoiding confrontation, the therapist seeks to achieve clarity about the patient's motivation for change, impediments that stand in the way of making needed change, and possible actions that might bring about change.

The U.S. Food and Drug Administration (FDA) has approved the use of three drugs—disulfiram, naltrexone, and acamprosate—for the treatment of DSM-IV alcohol dependence (which roughly corresponds to DSM-5's moderate or severe alcohol use disorder).

Disulfiram inhibits aldehyde dehydrogenase, an enzyme necessary for the metabolism of alcohol. Inhibiting this enzyme leads to the accumulation of acetaldehyde when alcohol is consumed. Acetaldehyde is toxic and induces noxious symptoms, such as nausea, vomiting, palpitations, and hypotension. Disulfiram should be prescribed only after careful consideration and with the full cooperation of the patient. The usual dosage is 250 mg once daily. Because patients taking disulfiram are aware of the potential adverse reaction, they are motivated to avoid alcohol.

Naltrexone, a p-opioid antagonist, appears to reduce the pleasurable effects of and craving for alcohol. The recommended daily dosage is 50 mg. The drug is generally well tolerated but can produce nausea, headache, anxiety, or sedation. A black box warning advises that naltrexone not be given to people with severe liver disease and that its use requires periodic monitoring of liver enzymes.

Acamprosate, a glutamate receptor modulator, also reduces craving. Acamprosate is generally well tolerated, although some patients report headache, diarrhea, flatulence, and nausea. The recommended dosage is two 333-mg tablets three times a day, a dosing schedule that may limit its acceptance.

Both naltrexone and acamprosate help patients to maintain abstinence, thereby reducing the risk of relapse. For those who are chronically noncompliant, naltrexone is also available in an extended-release injectable formulation that is administered monthly.

A large government-supported multicenter trial, the COMBINE study, found that naltrexone, when given with a modest program of medical management, was as effective as specialized behavioral treatment in preventing relapse. The researchers concluded that naltrexone along with medical management could be easily delivered in most health care settings, thus serving alcohol-abusing persons who might otherwise not receive treatment.

Rehabilitation programs usually take place in residential or outpatient settings. In general, the patients most likely to benefit have a stable marriage and home life, are employed, have fewer co-occurring psychiatric disorders (especially antisocial personality disorder), and have no family history of alcoholism. Nearly 50% of treated alcoholic persons relapse, most commonly during the first 6 months following treatment. Even though relapse is common, treatment should be viewed as beneficial and cost-effective, with the potential to reduce the medical and social complications of alcohol use disorders.

Many persons addicted to drugs have serious medical conditions that the physician also must address during this phase of treatment. For example, a heroin-addicted person may have an antecubital cellulitis and be seropositive for HIV; a cocaine-

addicted person may have an eroded nasal septum (from sniffing the drug) that has become secondarily infected.

Psychiatric comorbidity is important to assess during the first phase of treatment. Many, if not most, substance abusers have additional mental disorders that can have a profound effect on their treatment outcome. First of all, it is Abuse of other substances is the most common comorbidity, followed by mood disorders, anxiety disorders, and personality disorders. Comorbidity complicates treatment efforts and reduces the likelihood of success. Examples include the amphetamine abuser who develops a suicidal depression during withdrawal and the heroin-addicted person with an antisocial personality disorder whose use seems, in part, motivated by his membership in a street gang that celebrates drug use.

The continuation phase of treatment consists of efforts to rehabilitate the patient and to prevent future drug abuse. The success of this phase is almost completely dependent on the motivation of the patient because there is no way to truly assess or enforce compliance - except, of course, by frequent and random drug screening tests and threats of punishment for noncompliance.

Multimodal approaches are necessary for rehabilitation. Individual psychotherapy is important to help patients learn about their motivation for using drugs and to learn alternative methods for handling stressful situations. Group therapy, especially in the hospital or outpatient programs, is useful in confronting patients with the seriousness of their problem and how the drug significantly affects their lives. Peer groups are unequalled in their ability to achieve confrontation. Among cocaine-dependent persons, the combination of individual and group psychotherapy works best at preventing relapse.

In list other approaches, cognitive-behavioral therapy may help the patient reverse habits that lead to or promote drug use or may correct cognitive distortions (e.g. If I don't use drugs, I won't be popular). Social skills training may help some patients break a cycle of getting in with the wrong crowd and learn to meet and be accepted by more appropriate peers. Family therapy and marital counseling are necessary adjuncts in other patients.

Contingency management, a form of behavior therapy, is used in some programs to encourage a drug-free lifestyle. With contingency management, people are "rewarded" (or positively reinforced) for appropriate behavior. For example, each time a person submits a clean urine sample, he or she receives a voucher that can be exchanged for retail goods or services. Research shows that low-cost rewards can be effective in reducing drug use.

Medical approaches for the continuation phase of treatment can be important. Methadone maintenance has an established role in the treatment of opioid addiction. The user is given a carefully monitored substitute addiction that allows him or her to function in society. Buprenorphine is another recent alternative for the maintenance phase of treatment. Patients with comorbid psychiatric disorders may, of course, benefit from ongoing treatment of anxiety, depression, or psychosis.

Non-Substance-Related Disorders

There are several conditions that do not involve ingestion of substances yet have similarities to alcohol and drug addictions. These are the so-called behavioral addictions, and several have been described, including sex addiction, compulsive shopping, and Internet addiction. The authors of DSM-5 concluded that only one - gambling disorder - had sufficient supporting data to be included in this section.

Gambling Disorder

Gambling has occurred in almost all cultures and throughout human history. Most individuals gamble responsibly, yet some become preoccupied with gambling and experience its many negative consequences. Officially recognized in DSM-III as pathological gambling, the disorder was classified an impulse-control disorder. Renamed gambling disorder in DSM-5, it has been moved to this chapter because of research showing its close connection to the substance-related disorders. The DSM-5 diagnostic criteria are listed in Box 15-2.

Box 15-2. DSM-5 Diagnostic Criteria for Gambling Disorder

A. Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

1. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
2. Is restless or irritable when attempting to cut down or stop gambling.
3. Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
4. Is often preoccupied with gambling (e.g. having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
5. Often gambles when feeling distressed (e.g. helpless, guilty, anxious, depressed).
6. After losing money gambling, often returns another day to get even (“chasing” one’s losses).
7. Lies to conceal the extent of involvement with gambling.
8. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
9. Relies on others to provide money to relieve desperate financial situations caused by gambling.

B. The gambling behavior is not better explained by a manic episode.

Specify if:

Episodic: Meeting diagnostic criteria at more than one-time point, with symptoms subsiding between periods of gambling disorder for at least several months.

Persistent: Experiencing continuous symptoms, to meet diagnostic criteria for multiple years.

Specify if:

In early remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met for at least 3 months but for less than 12 months.

In sustained remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met during a period of 12 months or longer.

Specify current severity:

Mild: 4 - 5 criteria met.

Moderate: 6 - 7 criteria met.

Severe: 8 - 9 criteria met.

Gambling disorder affects 0.4 % - 2 % of the general population. The prevalence is lower in areas with limited gambling opportunities. Two-thirds of people with gambling disorder are male; they typically begin to gamble in adolescence, and some become hooked almost from their first bet. Women take up gambling later than men but tend to develop a gambling disorder more quickly. Mood and anxiety disorders, substance use disorders, and personality disorders are common in people with gambling disorder.

The following case is that of a woman who suffered the damaging effects of gambling disorder:

Mary, a 42-year-old accountant, had gambled recreationally for years.

At age 38, for reasons she could not explain, she became hooked on casino slot machines. Her interest in gambling gradually escalated, and within a year Mary was gambling during most business days. She also gambled most weekends, telling her husband she was at work. To acquire money for gambling, Mary created a fake company to which she transferred nearly \$300,000 from her accounting firm. The embezzlement was eventually detected and Mary was arrested. Following her arrest, and the associated public humiliation, Mary became severely depressed and attempted suicide by drug overdose. After a brief hospital stay, Mary entered counseling and was prescribed paroxetine. In the plea bargain, she agreed to perform 400 hours of community service.

Gambling disorder runs in families and may be genetically related to the substance use disorders and antisocial personality disorder. Brain imaging research shows that gambling activates the brain's reward circuitry, but also that reduced activity occurs in areas mediating planning and decision making.

The use of medications to treat gambling disorder is being actively researched. The opioid antagonist naltrexone (50 - 200 mg/day) has been shown to be more effective than placebo. Nalmefene, another opioid antagonist, has also been shown to reduce gambling urges and behaviors, but it is unavailable in the United States. The selective serotonin reuptake inhibitors are being studied and may be helpful, particularly in depressed or anxious patients.

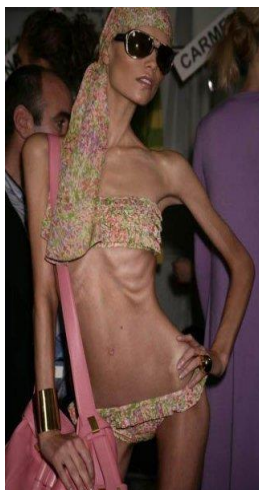
Referral to Gamblers Anonymous, a 12-step program similar to Alcoholics Anonymous, may be helpful, although dropout rates are high. Inpatient treatment and rehabilitation programs similar to those for substance use disorders may be helpful for selected patients.

Other patients can benefit from individual psychotherapy geared toward helping them understand why they gamble and assisting them in dealing with feelings of hopelessness, depression, and guilt. Cognitive-behavioral theory (CBT) can be used to address the irrational thoughts and beliefs associated with pathological gambling (I'll win big with the next bet!). CBT is often combined with motivational interviewing. With motivational interviewing, therapists encourage the patient to make needed changes in his or her behavior. Relapse prevention methods can help patients identify the triggers that promote gambling and teach them how to deal more effectively with these triggers. Family therapy offers the addicted gambler an opportunity to make amends, to learn better communication skills, and to repair the rifts that gambling inevitably creates in families.

BEHAVIORAL DISORDERS ASSOCIATED WITH IMPAIRED FOOD INTAKE AND SLEEP

ANOREXIA NERVOSA is a disease often manifests in childhood or adolescence and is a deliberate restriction in food intake, or even a complete rejection of food in order to correct an imaginary or drastically overestimate overweight. The patient has been distorted perception of their physical form. Relentless pursuit to remedy this "deficiency" lead to severe secondary somato-endocrine shifts, significant weight loss is often up to cachexia.

Start of intensive study of the disease associated with the work W. Gull (1868), Ch. Lasegue (1873), which are almost simultaneously and independently from each other have published articles on anorexia nervosa. W. Gull coined the term "anorexia nervosa» (anorexia nervosa). In Russia, one of the first publications on this subject belongs to AA Kiselev. In 1894, he described the genesis of hysterical anorexia nervosa, 11-year-old girl. The modern concept of the disorder began to assert itself through the work of Hilde Bruch, Arthur Crisp and Gerald Russell. Of particular interest in anorexia nervosa emerged at that time was due to its increasing incidence. According to J. Payne (1969), '60s were a real boom for the patients of this kind. " H. Bruch (1965), believes that anorexia nervosa belongs to the range of diseases, "specific to a particular century, a certain cultural level." Noting that each epoch its demands to the human nervous system, W. Baeyer (1965) anorexia nervosa refers to diseases of our time, "disease of the century."



Anorexia nervosa occurs at a frequency of 0.37% to 100 thousand. Population and is most common in northern European countries, where the incidence of new cases of it is 4 100 thousand. Population. The total prevalence of anorexia nervosa was 1.2% among women and 0.29% among men, due to changes in the criteria of feminine beauty with the idealization of a fragile constitution. Anorexia nervosa often noted in the age 14 - 18 years, but perhaps its origin in people 20 - 28 years. The peak is in adolescence:

the incidence in teenage girls is 1:100 – 1:250.

High level of comorbidity of anorexia nervosa with depression and obsessive-compulsive disorder was shown.

The etiology and pathogenesis of anorexia nervosa

Anorexia nervosa should be considered as a heterogeneous disorder with a complex multifactorial etiology, is the interaction of heredity and environment, especially social factors. At present, it is assumed that anorexia nervosa is the result of a combination of individual predisposition and social factors that induce to observe the diet.

Genetic factors. Relatives of the first line of kinship are more likely to develop anorexia nervosa. In monozygotic twins marked by a large concordance incidence than in dizygotic twins. Linkage analysis of genes within the genome is not found for the loci diagnostic broad category of anorexia nervosa. Genetic vulnerability exists probably in predisposition to a certain type of the constitution, which is subject to factors that mediate manifestations of cleaning behavior (self-induced vomiting), the restrictive supply patterns. Exhibit a genetic predisposition and vulnerability may be in adverse conditions such as improper diet or emotional stress.

Biological factors. These include overweight in childhood and early menarche. Attaches importance to dysfunction regulating feeding behavior of neurotransmitters, such as serotonin, dopamine, norepinephrine, detectable in patients with eating disorders.

Family factors. The families of patients with anorexia nervosa often describe special "intra-climate" - the dominance of tyrannical mother in child rearing when a subordinate position and the non-participation of his father in the upbringing of children, which may be a contributing factor to the development of eating disorders and impeding recovery. Some importance in the origin of anorexia nervosa given to factors such as negative attitudes to food in the family, over feeding child in early childhood.

Personal factors. By the psychological risk factors include obsessive perfectionist-type personality, low self-esteem, a sense of worthlessness, self-doubt. Quite often you can observe in the nature of the patients presence hysteroid with egocentrism, a high level of claims, as well as psychasthenic features - uncertainty, anxiety, shyness, isolation, increased demands on themselves and others, uncompromising, lack of flexibility in dealing with others, an excessive sense of duty, increased integrity, pointed vanity, the desire for high performance in school ("a student's disease"), lack of desire to please teenagers of the opposite sex, neglect of girls clothes and ornaments.

Socio-cultural factors. They are living in the industrialized countries, the emphasis on thinness as the main sign of beauty. There are indications that certain activities may contribute to the development of eating disorders, including anorexia nervosa. Most predisposition to anorexia, marked by students of ballet schools, gymnasts, models.

Clinical manifestations of anorexia nervosa

Anorexia nervosa eating disorder characterized by deliberate weight loss, induced and / or supported by the patient, for the purpose of weight loss or prevention of weight gain. When anorexia is observed pathological desire weight loss, accompanied by a strong fear of obesity. The patient has been distorted perception of their physical form and present fear of weight gain, even if this is not really there special ways of dealing with food. This leads to severe secondary somato-endocrine shifts, significant weight loss is often up to the onset of cachexia and amenorrhea as one of the main clinical manifestations developing in chronic food insufficiency. This loss of appetite in patients is rare, and only in advanced cases.

Restriction food that good dissimulated earlier in conscious leads to the fact that under the supervision of psychiatric patients appear only after 3-4 years or more from the beginning of intensive weight loss, usually in a state of severe cachexia with persistent amenorrhea. The severity of secondary somato-endocrine violations were rarely require hospital treatment for vital indications. During formed syndrome of anorexia nervosa underweight in severe cachexia is 30-50% or more of body weight to the disease.

Anorexia separated during the following stages:

Stage 1 - dismorfomania.

Stage 2 - anorectic.

Stage 3 - cachectic.

Stage 4 - reduction of anorexia nervosa.

Clinic of the first stage is usually exhausted by very special option Dismorphomania syndrome (in the classic version of this syndrome include delusional or overvalued ideas of discontent own appearance, the idea of relationships, depression and lack of desire for an imaginary correction) (MV Korkin, 1967). A feature of this syndrome in anorexia nervosa is relatively lower expression of ideas and the relationship of depression with severe intensity activities aimed at "correcting physical disability." Ideas include physical disability conviction excessive fullness, teens may

not like any of their "correct figure" as a whole or parts of the body, "round cheeks", "fat belly", "rounded hips." The emergence of discontent own appearance coincides, as a rule, the real change in body shape, typical of adolescence. Thoughts about excessive fullness can be either overvalued or delusional.

Typical of this syndrome is the idea of relationships in anorexia nervosa is very rudimentary. The decisive in the formation of the syndrome is often a discrepancy between the patient, in his opinion, his own "ideal" - a literary hero or a person's inner circle with the desire to imitate him in everything, and above all, be similar to his appearance and figure. The opinion of others on the exterior of the patient is much less important to him. However, sensitivity teens cause that trigger the desire to "correct" physical disability become careless remarks of teachers, parents and peers.



The third typical classical syndrome Dismorphomania component - affective disorders - with this disease also has the features. Depressive disorders are generally less pronounced and more remote stages are closely related with the degree of effectiveness of the exterior of the correction carried out by patients. Among the features of anorexia nervosa Dismorphomania should include the fact that the possibility of correcting the alleged or actual physical shortage lies in the hands of the patient, and it is always one way or another it sells.

The first phase of anorexia nervosa lasts from 2 to 4 years and replaced by a second step in which the syndrome of anorexia nervosa becomes clinical perfection.

The second phase begins with an active commitment to the correction of the exterior and conditionally terminates weight loss of 20-50% of the initial weight, the development of secondary somato-endocrine shifts oligo- amenorrhea or amenorrhea. weight loss methods can be very varied and carefully hidden at the beginning of the correction of excessive fullness. Initially, most physical activity, active sports patients combined with limited amounts of food. In the future, a way to lose weight varies

depending on the nature and severity of "defect appearance", as well as premorbid personality traits, but it takes a leading position in the food restriction. By reducing the amount of food, patients initially exclude a number of foods rich in carbohydrates or proteins, and then begin to comply with the most severe diet and eat mostly dairy-vegetarian food. At the same time, patients with a strict diet to exhaustion engaged specially designed exercise - doing all standing, a lot of walking, reduces sleep, tightening the waist with belts or cords so that the food is "slowly absorbed."

Hunger in patients with anorexia nervosa expressed enough that substantially prevents the proper denial of food. Most patients hide their behaviors aimed at weight loss. Patients with anorexia usually refuse to eat with your family or in a public place. This food is their passion: they collect recipes and prepare delicious food for others. A characteristic feature of these patients is often a desire to "overfeed" of relatives, especially younger brothers and sisters. During the meal, they are trying to hide their portions to poke or swipe the pockets. When they point to their strange behavior, they often deny that this is strange, or just do not want to discuss it. All day, patients are hungry, constantly thinking about food, imagining all the nuances of the upcoming meal, the thought of food becoming intrusive. Having bought a lot of food, and sometimes stealing them, the patients returned home, lay the table, it is often beautifully served, and start eating the most delicious food to enjoy. However, they cannot stop and eat all the food available in the house. Attacks of bulimia are often observed in the clinical picture of anorexia nervosa. Bulimia is an irresistible hunger, almost no satiety, while patients can absorb very large amounts of food, often even not enough edible.

Overpowering fear of acquisition of overweight and completeness is characteristic of all patients with this disease. Patients are looking for more and more ways to lose weight. Among them are laxatives, often in very large doses, less use of enemas. Some people chew and then spit out the food. Another very common way to lose weight with the severity of hunger is artificially induce vomiting. Choosing this method often is conscious character, although sometimes patients come to him by chance could not resist the desire to eat, they eat a lot of food at once, and then because of the fullness cannot keep her. The resulting vomiting and lead patients to believe that you can eat in sufficient quantity and quickly released from the food intake has not happened yet with the help of artificial vomiting.



Initially, gag act is accompanied by characteristic autonomic manifestations and delivers patient discomfort. In the future, with frequent vomiting, this procedure is simplified: patient enough to make expectorant movement or just tilt the trunk, click on the epigastric region and all eaten food is thrown out without painful autonomic manifestations. Some people have resorted to repeated gastric lavage after the first vomiting, drinking 2-3 liters of water.

Other passive methods for weight loss should also include the use of a number of drugs that reduce appetite and psychostimulants, in particular sydnocarb. In order to lose weight many patients start to smoke, drink large quantities of black coffee, use diuretics.

This feeding behavior results in weight loss and is accompanied by a gradual increase in the secondary somato-endocrine changes. On average, 1-2 years from the beginning of the "correction" alleged excessive fullness comes amenorrhea.

Clinic of mental disorders at this stage of the disease, in addition to the active "correction" of appearance, includes the fear to get better, which leads to further weight loss patients. Each piece is eaten by patients with anxiety. There affective instability, and the mood is largely dependent on how successful is the "correction" appearance; any, even minor, weight gain is accompanied by a sharp decrease in mood. Sophisticated family relations due to wrong eating behavior of patients are psycho-traumatic factor, also causes pathological reaction to the situation. Thus, in the formation of affective disorders at this stage of the disease leading role belongs psychogenic factors.

An important place in the clinical picture of the disease take hypochondriacal disorder. Secondary gastro-enterocolite, omission of virtually all internal organs and especially gastro-enteroptosis, developing as a result of restrictions in food or improper feeding behavior, accompanied by pain in the stomach and along the intestine after a meal, persistent constipation. There is a lock on the patients' discomfort in the gastrointestinal tract. Typical for this phase of anorexia nervosa is due to the fear of

food not only fear to get better, but also the possibility of occurrence of painful sensations in the epigastric region. By psychopathological disorders of this period are unique obsessive phenomenon. They are inextricably linked to dismorphomanic experiences and manifest themselves in the form of obsessive fear of food, wait for a strong sense of hunger, the need to induce vomiting and compulsive counting calories contained in the food eaten.

On stage anorectic anorexia sharpened the available to psychopathic traits disease. Grow explosively, selfishness, excessive demands, patients are becoming "tyrants" in their own families. Despite the significant weight loss, the severity of secondary somatoendokrinnyh shifts in patients with virtually no physical weakness, they were very moving, activity, performance. The long absence of patients with anorexia nervosa asthenic phenomena in the form of physical weakness, saving a large motor activity is an important diagnostic criterion, primarily to exclude primary somatic pathology.

The clinical picture of the disease in the anorectic stage often also includes autonomic dysfunction in the form of attacks of breathlessness, palpitations, dizziness, enhanced sweating Paroxysmal autonomic disorders often occur several hours after a meal Long purposeful restriction in food, as well as other forms of special eating lead, usually a significant weight loss (50% or more), and cachexia - the third stage of the disease.



At this stage, physical activity, typical of earlier stages of anorexia nervosa, is greatly reduced. The leading place in the clinical picture takes asthenic syndrome with prevalence adynamia and increased fatigability. During severe cachexia patients completely lose their critical attitude to his condition and still continue to stubbornly refuse to eat. Being extremely exhausted, they often say that they have overweight. In other words, there is a delusional attitude toward their appearance, based on what is a violation of the perception of their own body. Against the backdrop of severe fatigue may occasionally occur depersonalisation-derealisation phenomenon.

The clinical picture is dominated by somato-endocrine violations. After the occurrence of amenorrhea, weight loss is greatly accelerated. Patients completely absent subcutaneous fat, growing degenerative changes in the skin, muscles, developing myocardial and there are bradycardia, hypotension, acrocyanosis, drop in body temperature and skin elasticity, reduces blood sugar levels, there are signs of anemia. Patients quickly freeze, there is increased fragility of nails, hair fall out, broken teeth. Severe water and electrolyte shifts can lead to the development of painful muscle cramps, sometimes possible polyneuritis (nutritional polyneuritis). As a result, long-term eating disorders, as well as special eating heavier clinical picture of gastritis and enterocolitis. Patients not only fear, but also cannot eat normally because of the pathology of the gastrointestinal tract.

In cachectic stage of the clinical picture of poor, monotonous and almost a sister to all options syndrome anorexia nervosa any nosology. Phenomena of dysmorphomania on stage cachexia lose previous affective saturation, weight loss methods are limited to a carefully designed diet, and in some cases - taking laxatives and vomiting. The persistent refusal to eat on stage cachexia due to the lack of understanding of the severity of the patients of their condition and fear recover create great difficulties for the treatment of this serious condition, patients often categorically refuse to provide them with medical care.

To the doctor, patients usually fall when the body weight loss have become visible and there are such features as hypothermia (up to 35°C), edema, bradycardia, often lead to sudden cardiac arrest due to a lack of potassium, magnesium and total violation of electrolytes, hypotension and vellus hair growth (as in infants). Often it manifested postural hypotension; it typically is caused by hypovolemia and in some cases a decrease in cardiac output. The most common are physical complaints, especially of discomfort in the epigastric region, spasmodic stomach pain, chronic constipation, absence of lactose digestibility, nausea, functional dyspepsia, hair loss, dry skin, paleness, marbling of the skin, the appearance of fine hair on the face, on the back (lanugo), edema due to lack of protein, violation nail structure.

Among other effects should be allocated osteoporosis, fractures of extremities and spine. Long at provoking vomiting can cause tooth enamel erosion, caries or even abscesses; also possible pain in the mouth and throat. Riboflavin deficiency may be the cause of the cracks on the lips, especially in the corners of the mouth, and the iron and zinc deficiency causes glossitis and loss of taste sensation. Furthermore, there are a number of metabolic changes.

The progress of the reduction phase of anorexia nervosa is very important in the recovery process of patients. The clinical manifestations of this stage is dominated by

asthenic symptoms, fear to get better, pathological fixation on the sensations from the gastrointestinal tract. If weight gain is updated Dismorphomania reappears desire to "correct" appearance, increases depressive symptoms. With the improvement of physical condition of physical weakness quickly disappears, patients become very mobile, eager to carry out complex exercise, may resort to high doses of laxatives, cause vomiting. Until the restoration of menstruation mental condition characterized by mood instability, periodic updating dismorphomania phenomena, explosive, prone to hysterical forms of response. During the first 2 years of relapses syndrome, requiring hospital treatment.

Along with an exemplary embodiment of anorexia nervosa in clinical practice, there are varieties of this disease, with the most different from symptoms typical for pre-anorectic stage. It is primarily concerned with the reasons for refusal of food.

Self-restraint in eating may be due to fear of choking food or fear of vomiting in a public place in the presence of recorded vomiting reaction as a kind of hysterical forms of response to stressful situations in the structure of neurotic disorders. Among premorbid features in these patients can be identified demonstrative, Moderate self-centeredness combined with indecision, the tendency to doubt, uncertainty, with a tendency to fix attention on the sensations, to exaggerate the severity of somatic sensations. The mental state to the forefront the fear of nausea and vomiting (vomitofobiya). Patients live in constant fear of possible vomiting, resulting in severely limit yourself in food intake or completely refuse to eat. With increasing fatigue somatogenetic as it leveled earlier and hysterical personality traits to the fore inhibited personality traits: anxiety, uncertainty, exhaustion, hypochondriacal. Despite the significant weight loss due to the restriction of food intake, these patients rarely comes amenorrhea. Depletion usually does not reach cachexia. However, in the more remote stages of the disease in these patients may be formed a special relationship to their appearance without the desire to get better, even though underweight.

Also, refusal to eat may have a delusional reasons not related to the patient's appearance. Most often, this hypochondriacal delusions ("not digested food" contained in food substances "violate the metabolism, spoil your skin" and so on. D.). Refusal to eat can be formed under the influence of imperative accusing or olfactory hallucinations, as well as being a manifestation of catatonic negativism. In schizophrenia, the symptoms are more pronounced dismorphophobic, refusal to eat is replaced by the ridiculous, pretentious' eating behavior. " Vomiting as vomitomania with bliss, ecstasy. Refusal of food is not accompanied by internal strife. Appetite is reduced quickly. Observed thought disorder, obsessive-compulsive phenomena, depersonalization, senestopathia. Noteworthy is the dissociation between the pursuit of

harmony, grace and sloppiness, slovenliness. Falling activity observed at the early stages of the disease, coupled with the rapid increase in isolation, coldness and bitterness of the family.

In the formation of the syndrome of anorexia nervosa can be controversial and the role of affective disorders. In some cases, depressive syndrome is the first clinical manifestation of the disease, and dismorphophobic –dismorphomaniac disorders are an integral part. In this embodiment, the onset of the disease clinical signs of depression quite pronounced, although often do not receive the full syndromal completion. Mood fluctuations, decreased mood, drop in performance, mental activity determines an initial period of the disease.

Box 1

Anorexia nervosa criteria according to ICD – 10

- (a) Body weight is maintained at least 15 % below that expected (either lost or never achieved) or Quetelet's body mass index 17.5 kg/m^2); prepubertal patients may show failure to make the expected weight gain during the period of growth.
- (b) Weight loss is self-induced by avoiding fattening foods; one or more of the following may also be present: self-induced vomiting; self-induced purging; excessive exercise; use of appetite suppressants and/or diuretics.
- (c) Body image distortion in the form of a specific psychopathology whereby a dread of fatness persists as an intrusive overvalued idea and the patient imposes a low weight threshold on self.
- (d) Widespread endocrine disorder involving the hypothalamic – pituitary – gonadal axis is manifest in women as amenorrhoea and in men as a loss of sexual interest and potency. An apparent exception is the persistence of vaginal bleeds in anorexic women who are receiving replacement hormonal therapy, most commonly taken as a contraceptive pill. There may also be elevated levels of growth hormone, raised levels of cortisol, changes in the peripheral metabolism of the thyroid hormone, and abnormalities of insulin secretion.
- (e) If onset is prepubertal, the sequence of pubertal events is delayed or arrested (growth ceases; in girls the breasts do not develop and there is a primary amenorrhoea; in boys the genitals remain juvenile).

<https://www.icd10data.com/ICD10CM/Codes/F01-F99/F50-F59/F50-F50.00>

The diagnostic criteria for anorexia nervosa.

One of the important aspects of anorexia nervosa remains its nosological accessory. Anorexia nervosa syndrome occurs in a number of neuropsychiatric diseases: neuroses, psychopathy, neurosis-like schizophrenia, organic neuro-endocrine. Many authors regard anorexia nervosa as an independent disease, which is reflected in the ICD-10, where anorexia nervosa, made a separate nosological unit and is defined as frequent eating disorder characterized by a significant loss of body weight due to the refusal of food.

As part of the ICD-10 diagnostic features obligate anorexia nervosa is:

1. Body weight is maintained at a level of at least 15% lower than expected (higher level has been reduced or has not been reached) or body mass index $K_{veteleta}$ is 17.5 or lower (this index is determined by the ratio of body weight in kilograms by the square of height meters). In prepubertal age may show failure to gain weight during growth.

2. Weight loss is achieved by the patient by avoiding food that is "full", and one or more of the following methods: induction at vomiting, laxatives, excessive gymnastic exercises; use of appetite suppressants and / or diuretics.

3. The distortion of body image takes a specific psychopathological form in which the terror of obesity is stored as intrusive overvalued idea and the patient considers himself only valid for low weight.

4. Total endocrine disorder involving the hypothalamic-pituitary axis, gonads and manifested amenorrhea in women, and in men loss of libido and potency. The obvious exception is the preservation of vaginal bleeding in anorectic women who are on hormone replacement therapy, often received a contraceptive purpose. There may be increased levels of growth hormone and cortisol levels, changes in the peripheral metabolism of thyroid hormone and abnormalities of insulin secretion.

5. Manifestations of puberty are delayed or not occur (growth ceases, the girls do not develop breasts and there is a primary amenorrhea, and delayed growth in boys' genitals). When recovery puberty is often completed normally, but the girls first menstruation occurs late.

When you install the diagnosis of anorexia nervosa should be remembered that patients with this disorder are often secretive, deny their existing symptoms and resist treatment. In almost all cases it is necessary to close relatives or confirmed history. In addition to the assessment of mental status is necessary to conduct a thorough physical and neurological examination of the patient, as well as to appoint a series of laboratory tests to assess the metabolic processes.

Principles of therapy of patients with anorexia nervosa.

The main provisions of the introduction of patients with anorexia nervosa

Treatment of eating disorders is based on a combined (multimodal) model. The therapeutic strategy is determined by the severity of the disease and the specific diagnosis of an eating disorder. In anorexia nervosa are the key components of improving physical health, cognitive, behavioral, and family therapy, while

pharmacotherapy is symptomatic and is regarded as an adjunct to other therapies. Are essential components of the treatment and nutritional rehabilitation measures aimed at the restoration of body weight.

Depending on the conditions of patients with anorexia nervosa treatment can be carried out as an outpatient or in station conditions. However, according to local researchers and clinicians, the treatment is advantageously carried out in a psychiatric hospital. In cases where anorexia nervosa threatens the life of the patient (body weight is reduced by 40% or more, are expressed somatic disorders), require emergency aid, including assistance to forcibly.

Building a therapeutic plan for the treatment of patients with anorexia nervosa should start with the evaluation and monitoring of the general state of the patients, during which it is recommended to pay special attention vital manifestations, physical status (including height and weight), heart rate and rhythm, noise in the heart (especially mean systolic heart extension cordial tone or noise with mitral valve prolapse), acrocyanosis, of delayed capillary refill, lanugo, salivary gland enlargement, signs of self-injurious behavior (bruises, linear scars, marks of cigarette burns), muscle weakness, manifestations of hypokalemia symptoms of Chvostek and Trousseau, characteristics of gait and ocular pathology.

The first step is to determine the patient's her ideal weight. Widely used body mass index (BMI), calculated by dividing weight in kilograms by height in m². In adults, food is considered to be at low BMI less than 18.5 kg / m². Children with a BMI of less than 5% of the normative regarded as not get body weight.

It recommended detailed laboratory evaluation at the initial examination and on admission, as well as the conduct of biochemical monitoring in the early stages of refeeding.

Examinations recommended for hospitalization.

Mane examination: general blood analysis; presence of urea and electrolytes; calcium; magnesium content; phosphate content; glucose; blood serum proteins; liver function; electrocardiogram; vitamin B12, folate; study of thyroid function.

Complementary examination: creatinekinase; erythrocyte transketolase / serum thiamine; dual energy X-ray absorptiometry; plasma zinc.

Recommended biochemical monitoring in the early stages of refeeding.

Daily: The control of the content of urea and electrolytes; calcium; magnesium; phosphates; glucose.

Weekly: liver function tests; serum proteins; general blood analysis.

Less: control of folate; ferritin.

Depending on the patient's condition may require additional study.

When evaluating and monitoring the mental state of the patient and his security analysis subject are medical history, signs and symptoms associated with the mental state that often comorbid with eating disorders (eg, mood disorders, anxiety and abuse of substances) disorders, as well as personal characteristics and deviations that significantly affect the course of the disease and its outcomes. Motivational status of patients is no less important because it determines their ability to be involved in the therapy process. patient safety includes both physiological and mental health settings, in particular the possibility of suicidal thoughts and suicidal ideation, as well as impulsive and compulsive self-injurious behavior.

Selecting the conditions of treatment and the decision on the need for hospitalization based on the physical, mental and behavioral factors, including rapid or steady decline in food intake, ongoing weight loss, despite the measures taken by the ambulatory accompanying psychiatric problems.

The changes of vital displays which indicate the need for urgent hospitalization, include orthostatic hypotension with an increase in heart rate of 20 beats / min or a fall in blood pressure in the standing position at 20 mm Hg. Article; bradycardia with a heart rate less than 40 beats / min; tachycardia more than 110 beats / min; or the inability to maintain a patient's core body temperature.

Body weight of the patient in isolation should never be a criterion for hospitalization or hospital discharge. Patients must not only gain weight, but to learn before discharge to store it, otherwise they will immediately reduce caloric intake to a level that it is unable to hold the. Patients with lack of proper motivation and support are at a high frequency of early recurrences.

It should be noted that the majority of patients with anorexia nervosa can be treated successfully as an outpatient procedure, with due provision of a holistic approach to therapy, including both consultations on power correction, medication and psychotherapeutic support, which should continue for at least 6 months.

Comprehensive treatment for anorexia nervosa includes activities aimed at the restoration of power, the impact of psychosocial and pharmacotherapy. The main objectives of therapy as follows:

1) patients achieving a healthy body weight (associated with the return of normal menstruation and ovulation in women, normal sexual desire, and hormone levels in men);

2) relief of physical complications;

3) increase the motivation of patients to cooperate in the restoration of healthy eating patterns and participation in treatment;

4) training of patients with a healthy diet and eating and a number of others.

The first step of treatment of patients with anorexia nervosa is to convince the patient and relatives in need of treatment and talk about it in detail. This may require a lot of time and effort, because patients usually underestimate the danger of his condition.

Nutritional rehabilitation

Nutritional care of patients suffering from anorexia nervosa, is an important part of their treatment. Nutritional intervention should be considered within the overall context of the patient's psychological. The main purpose is to correct body composition, but it is possible only if the correct cell functioning. This requires a correction to achieve a biochemical disorders weight gain. To determine specific protein deficiency, fatty acids and trace elements, use history collected nutritionist supply that provides information on the fluid consumption of caffeine and alcohol use, smoking, use of vitamin supplements and the results of measurement of weight and height.

Nutritional rehabilitation is aimed not only at restoring the body weight, the normalization of eating behavior, but also the formation of adequate perception of hunger and satiety, correction of psychological consequences of malnutrition. To enhance the effectiveness of restorative nursing program is offered to use a system of positive and negative reinforcement, the intensity of which can be changed as to achieve their goals.

In drawing up the initial diet for the patient should be calculated and the amount of dietary energy that should meet or slightly exceed its energy costs.

Actual results of the planned weekly control of weight gain should be about 900-1400 grams for inpatients and about 500-900 g for participants of outpatient programs. Patients gaining 1800-2300 g in 1 week, should be carefully evaluated for refeeding syndrome and fluid retention.

To determine the initial calorie diet is used the value of the energy cost. Caloric expenditure determined by age, height, sex, and weight of the present. Their assessment

is needed to control weight gain. To calculate the basic energy expenditure in normal practice, you can use the Harris-Benedict equation:

$$\text{Women BEE} = 655 + (9.6hM) + (1.8hH) - (4.7hA)$$

$$\text{Men BEE} = 665 + (13.7hM) + (5hH) - (6.8hA)$$

Legend: M-current body weight in kilograms; P- height, cm; A-age years, the BEE-basic energy expenses.

This largest major energy costs add another 30, 50 or 100% in the case of sedentary lifestyles, moderate activity or strenuous activity, respectively.

Starting caloric also will depend on the degree of cachexia patients, the severity of secondary somato-endocrine shifts. Indicator calorie food intake typically first treatment is 30-40 kcal / kg per day (about 1000-1600 kcal per day), progressively increasing up to 70-100 kcal / kg per day. A further increase in the diet should be individualized, respectively, a raise of patient body weight and energy costs. Most patients give quite satisfactory weight gain with diet 3000-3600 kcal. Men to restore body weight needs to be significantly more calories.

In patients with severe cachexia (weight loss more than 30-40% of the original) in the first weeks of treatment may not be weight gain, and sometimes observed decrease it. Falling weight usually occurs due to the disappearance of edema, which patients often come to treatment, or which occur in the first days of hospitalization, against the backdrop of changing patient nutrition. Particular attention should be paid to patients not gaining weight. The lack of weight gain at the beginning of treatment may be associated with different actions of patients who experience a strong fear of weight gain, they can throw out food, vomit, resort to frequent physical exercise or other forms of physical activity, but some of them actually revealed increased intensity of metabolic processes. To increase the caloric advantageously administered vitamin and mineral supplements. In critically ill patients should limit physical activity, which should strictly correspond to the quantity of food intake, and take into account the bone mineral density and cardiac function.

It is necessary to pay special attention to the dynamics of the patients in the course of nutritional therapy. Possible changes in the associated affective and anxiety disorders. If in the initial stage of the restoration of body weight can be reduced due to lack of food apathy and lethargy, then later, with the advent of the patients sensation of weight gain, it is possible intensification of anxiety and depressive symptoms, irritability and sometimes suicidal thoughts.

Increased body weight leads to a reduction of the majority of physiological complications of starvation, including improved electrolyte performance, heart and kidney function, concentration. However, the first resumption of feeding may be accompanied by adverse events, some of them can be heavy, so it is strongly recommended to start a health food with a small amount of food and gradually increasing its controlling somatic condition of the patient. A sudden increase in the metabolic load may provoke biochemical decompensation, and excessive protein intake is dangerous for patients with impaired renal or hepatic function. During refeeding possible violations of electrolyte metabolism, which are sometimes collectively referred to as "refeeding syndrome".

The initial stage of the resumption of power may be accompanied by mild transient, and in patients who abruptly discontinued use of laxatives and diuretics, a long-term (over several weeks) tendency to fluid retention, presumably due to the retention of salt and water, caused by an increase in aldosterone levels, is associated with chronic dehydration. Often there is edema. Patients may experience pain and a feeling of bloating when eating due to gastrointestinal dysfunction, characteristic of malnutrition.

Dangerous complications of refeeding in patients with anorexia nervosa can be hard refiding - a syndrome that occurs in patients with low body weight (typically less than 70% health), with the use of enteral and parenteral feeding, which is carried out in a very short period of time, or prescribe intensive mode Rehabilitation nursing. The syndrome includes hypophosphatemia, hypomagnesemia, hypocalcemia and fluid retention, and sometimes thiamin failure. Overly rapid resumption of feeding, nasogastric and parenteral feeding are a potential hazard of acute fluid retention, occurrence of cardiac arrhythmias, heart failure, respiratory failure, delirium, seizures, rhabdomyolysis, dysfunction of red blood cells and the threat of sudden death, especially in patients with the lowest weight. In these cases, the addition of phosphorus, magnesium and / or potassium necessary.

- 1) dehydration and electrolyte disorders;
- 2) accompanying emergency somatic pathology, which can not be cured under dystrophy;
- 3) the ineffectiveness of other treatments.

The decision on the appointment of tube feeding refers to the number of complex and difficult, so always be taken with caution. This procedure is necessary in the case when it comes to maintaining the patient's life, but it can be practiced in a short period of time a minimum. If a decision on the need tube feeding, usually prefer a nasogastric

route. In patients who are in critical condition, tube feeding allows to achieve a higher degree of control over food intake. Tube feeding can be very helpful in the recovery of weight in a short period of time, but it does not require the patient's active participation in the process of recovery and, therefore, plays a limited role in the long term. Therefore, it is recommended to hold it until the patient persists danger to physical health (for BMI 14 kg / m²) rather than continue as long as a normal weight is achieved.

Tube feeding should be administered via a nasogastric tube of small diameter (5-9 FG). During use, the probe should be checked each time its position along the length of the outer portion and validate the introduction of pH measurement or X-ray. Use standard isotonic - 1 kcal / l (4.2 kJ / ml) - food. Concentrated mixture useless, they cause excessive osmotic load for the intestine and excessive water load on the kidneys.

Chance of a number of modes. Tube feeding can be carried out continuously for 20 of 24 hours per day with a four-hour rest at night. In other cases, you can stop the feeding at mealtimes to allow the patient to continue to have their own. Feeding should be started with low intensity to minimize the risk of complications.

It is important to encourage patients to eat food, despite nasogastric feeding if they are physically able to tolerate it. In the early stages of tube feeding patients often feel worse, not better. It is useful to explain the reasons for patient discomfort experienced by them (bloating, fluid retention, rapid weight gain), and soothe him. Information on feeding mode and time will increase, can serve as a stimulus for the patient to increase oral intake, with the understanding that the tube feeding rate will decrease with increasing body weight. resumption meal planning should begin immediately, as soon as the tube feeding will be conducted on an ongoing basis. It is important to explain the plan to the patient and, if appropriate, his family. In passing it is recommended to reduce the tube feeding to oral diet gradually to prevent sharp reduction in weight and allow the patient to compensate by increasing food intake.

As an alternative to nasogastric feeding in very difficult situations, when a patient has a physical resistance and constantly pulls the probe, allowed the introduction of a surgical gastrostomy and eyunostoma, but it is justified only when the patient's persistent refusal of oral feeding. Force-feeding of children and adolescents is permissible only if their condition is life threatening for.

Psychotherapeutic treatment of patients with anorexia nervosa

The aim of psychotherapy in the treatment of patients with anorexia nervosa is to help patients:

- 1) start consciously cooperate in nutrition and physical rehabilitation;

2) change the dysfunctional behavior and attitude towards their existing malnutrition;

3) to improve interpersonal and social functioning;

4) impact on comorbid psychopathology and psychological conflicts that may exacerbate or contribute to the maintenance of eating disorders.

The use of individual therapy in the acute phase of restorative feeding is most effective. Complex therapeutic programs of patients with anorexia nervosa during recovery of the body weight, primarily include behavioral therapy using exercise, bed rest, various reinforcing stimulus (reward) to achieve the target weight and the desired behavior, in order to effectively increase the weight, warnings binge eating and purging of; family therapy, which is especially effective in patients younger than 18 years and is aimed at correcting violations of relations within the family, leading to the development of the disease. For teens who are treated stationary, participation in psychoeducational programs can contribute to weight gain and be as successful as the more intensive forms of family therapy.

After the restoration of body weight, given the protracted for anorexia nervosa, patients need long-term support and continuation of therapy up to 1 year or more. At this stage in adult patients with anorexia nervosa preferred individual cognitive-behavioral therapy, which can help reduce the risk of recurrence and improve outcomes.

Cognitive therapy is aimed at correcting distortions of cognitive structures in the form of perception itself thick, the definition of self-worth solely on the image of his body and a deep sense of inferiority and inefficiency. One of the elements of cognitive therapy is cognitive restructuring. With this approach, patients must find the specific negative thoughts, make a list of evidence to support these ideas and a list of evidence to refute these ideas and use it to manage their own behavior. Another element of cognitive therapy - problem solving. Develops different solutions, considering the likely effectiveness and feasibility of each solution to the problem, chooses the best defines the stages of implementation of the decision, implement it and then evaluates the entire process of solving the problem on the basis of their results. Another essential element is the monitoring of cognitive therapy: the patient must make daily entries in respect of meals, including the type of eaten food, meal times and the environment in which the fear of the food taken.

In patients who have difficulty in describing their problems, also used non-verbal therapeutic techniques (art therapy, movement program). At various stages of healing therapy is useful employment.

Medication treatment.

Pharmacotherapy anorexia nervosa used is limited, but it is necessary in conjunction with the above-described therapies in cases where only a nutritional rehabilitation programs are not sufficiently effective in restoring normal body weight of the patient or if the patient in severe comorbid symptoms. Since the latter, as well as the symptoms of anorexia nervosa, may reduce with weight gain, the decision on the use of psychotropic drugs should, if possible, take no earlier than the patient's body weight is restored.

In severe somatic condition of patients psychopharmacotherapy contraindicated. Limited are used to remove the anxiety and fear on the eve of receiving tranquilizers food (phenazepam, lorazepam). Metoclopramide is usually used in the swelling of the stomach and abdominal pain, leading to gastroparesis and early satiety. However, when prescribing doctor should be aware of the possibility of extrapyramidal disorders in patients with low body weight. When improving the overall physical condition of the currently used modern atypical antipsychotics, such as olanzapine, quetiapine, risperidone, effectively reducing high levels of anxiety, obsessive-compulsive manifestations, contributing to inadequate self-correction and similar psychotic disorders of thinking and weight gain. Not bad proven antidepressants and especially drugs of serotonin reuptake inhibitors (fluoxetine, paroxetine, sertraline, citalopram, escitalopram), as well as mianserin and others. These drugs are appropriate to prescribe for preventing resumption of disorders in patients with normalized body weight and for the treatment of observed anorexia nervosa depressive and obsessive-compulsive symptoms. In the treatment of anorexia nervosa with hypochondriac and paranoid disorders prescribed buteropheron line, risperidone.

It is good to keep in mind that low-power, patients are more prone to the side effects of medication. Thus, the use of tricyclic antidepressants may be associated with a higher risk of hypotension, heart arrhythmias, especially in patients with a cleaning behavior. It should, if possible, to avoid their appointment to patients with low body weight or the risk of suicide. Serious adverse effects are possible in the appointment of patients with anorexia nervosa and some other antidepressants. Bupropion increases the risk of seizures in patients with eating disorders, especially in the cases of binge-purge. Mirtazapine is associated with weight gain, increases the risk of developing neutropenia. When using antipsychotic drugs should be considered the possibility of developing extrapyramidal disorders, effects on insulin sensitivity, lipid metabolism and QT-interval duration.

Also in the medical therapy of patients with anorexia nervosa should include products that will improve the metabolic processes in the brain with neuroprotective and vasoactivated action, and if there are indications - and dehydration therapy.

After discharge from the hospital takes a long out-patient treatment. His goal - to achieve a healthy weight and maintaining it for at least 6 months. The basis of outpatient treatment - psychotherapy. After the restoration of body weight in a hospital for people with anorexia nervosa should be offered a course of psychotherapy on an outpatient basis, which focuses on eating behavior and attitudes to weight and shape, as well as on more general psychosocial problems, combined with a regular assessment of the deterioration of the risk of a physical, and mental health. The duration of the course of outpatient psychotherapy and somatic status check after weight restoration in a hospital should normally be at least 12 months.

BULIMIA NERVOSA

Bulimia nervosa is a syndrome characterized by repeated bouts of overeating and extreme measures of body weight controlling by vomiting, laxatives and diuretics.

In Western Europe and the US the one-year prevalence of bulimia nervosa has been estimated to be approximately 1 % in females and 0.1 % in males. The disease is manifested in the 12–35 age range, the peak is in 18.

High level of comorbidity of bulimia nervosa with affective disorders and personality disorders was shown.

Etiology and pathogenesis.

Both genetic and psychological mechanisms are reported. Perfectionism, anxiety, impulsivity, low self-esteem, parental problems (depression, alcoholism, drug abuse) increase the risk of developing bulimia. Sexual, physical abuse and neglect are often related to bulimia. Binge behaviour refers to the response to difficult thoughts and feelings. Early puberty, negative affect, low self-esteem, body dissatisfaction, internalization of the “thin ideal” lead to binge-eating.

Clinical picture. A key sign is the loss of control of eating behaviour, bouts of overeating with subsequent attempts to get rid of its effects (see Box 2). Usually the patients eat high-calorie soft-consistency foods. They eat secretly, in a hurry, sometimes without chewing. The frequency of bouts varies from a few per day to one in 1-2 weeks and ends with physical discomfort (nausea, epigastric pain, feeling of bloating), experiencing depression, guilt, self-discontent. An ordinary eating does not lead to saturation.

Box 2

Bulimia nervosa criteria according to ICD – 10

(a) There is a persistent preoccupation with eating, and an irresistible craving for food; the

patient succumbs to episodes of overeating in which large amounts of food are consumed in short periods of time.

(b) The patient attempts to counteract the "fattening" effects of food by one or more of the following: self-induced vomiting; purgative abuse, alternating periods of starvation; use of drugs such as appetite suppressants, thyroid preparations or diuretics. When bulimia occurs in diabetic patients they may choose to neglect their insulin treatment.

(c) The psychopathology consists of a morbid dread of fatness and the patient sets herself or himself a sharply defined weight threshold, well below the premorbid weight that constitutes the optimum or healthy weight in the opinion of the physician.

There is often, but not always, a history of an earlier episode of anorexia nervosa, the interval between the two disorders ranging from a few months to several years. This earlier episode may have been fully expressed, or may have assumed a minor cryptic form with a moderate loss of weight and/or a transient phase of amenorrhoea.

<https://www.icd10data.com/ICD10CM/Codes/F01-F99/F50-F59/F50-F50.00>

Decreasing of Cl^- and K^+ level in the blood can occur as a result of taking laxatives and diuretics. It causes weakness, drowsiness, and arrhythmias. The patients maintain their usual weight, sometimes it can be slightly increased or decreased.

The patients can realize their food behaviour as deviation and conceal it.

Assessment.

The assessment is similar to that for anorexia nervosa. Engagement is usually less problematic, than in anorexia, and the patients are more eager to change their bingeing behaviour. Methods of weight control and significant medical consequences should be fully assessed. The enquiry should cover gastrointestinal system (bleeding, regurgitation), kidney and endocrine function, teeth and salivary glands as well as screening for electrolyte abnormalities.

Treatment.

The UK NICE guidelines recommend to use cognitive-behavioural treatment. Patient can start with combination of self-help program and brief supportive psychotherapy. If self-help is unacceptable, individual eating-disorder-focused cognitive behavioural therapy is administered. The main elements of such psychotherapy are psychoeducation, monitoring of weight, dietary intake and eating behaviour, identifying of problem behaviour and its triggers, identification of negative beliefs about body, cognitive restructuring, exposure training, behavioural experiments, development of coping with triggers. The doctors need to explain to the person that goal of therapy is to stop binge-eating. Weight loss is attainable in the long term.

Pharmacotherapy in bulimia nervosa should be used to comorbid disorders – depression, anxiety, obsessions, impulsiveness. The efficacy of tricyclic antidepressants (imipramine, desipramine, amitripriline), selective serotonin reuptake inhibitors (fluoxetine), anticonvulsant topiramate is proven.

The UK NICE guidelines do not recommend use of medication as the sole

treatment.

OVEREATING ASSOCIATED WITH OTHER PSYCHOLOGICAL DISTURBANCES

Emotionally distressing events such as accidents, bereavements, surgical operations can lead to overeating and "reactive obesity".

VOMITING ASSOCIATED WITH OTHER PSYCHOLOGICAL DISTURBANCES

Repeated vomiting may occur in hypochondriacal disorder and in dissociative disorders. Still vomiting is one of the several bodily symptoms in these disorders.

SLEEP DISORDERS INORGANIC NATURE

ELECTROENCEPHALOGRAM

It is the recording of electrical activity of the brain. It is recorded by placing electrodes on the scalp and recording the potential difference between various electrodes. A normal EEG has following types of rhythm.

Stages of Sleep

Sleep can be divided into two stages:

- A. **Nonrapid eye movement sleep (NREM) or slow wave sleep** and
- B. **Rapid eye movement (REM) sleep or paradoxical sleep.**

A. *Nonrapid eye movement sleep*: It is further divided into following four stages:

- **Stage 1, NREM**: It is the first stage and the sleep is light (person can be easily aroused). The EEG shows, **loss of alpha waves** (which predominate when person has eyes closed but is still awake) and **predominance of theta waves**.
- **Stage 2, NREM**: It is the stage with **maximum duration**. It is characterized by two typical findings on electroencephalogram:
 - a. **Sleep spindles**: These are bursts of regular waves (frequency of 13-15 Hz, 50 microvolt) and
 - b. **K-complexes**: These are high voltage spikes which are seen intermittently.
- **Stage 3, NREM**: The sleep deepens and there is appearance of delta waves.
- **Stage 4, NREM**: This is deep sleep and is characterized by predominance of delta waves on EEG.

During the NREM sleep, there is pulsatile release of **gonadotropins** and **growth hormones**. Further, the blood pressure, heart rate and respiratory rate also decreases.

B. *Rapid eye movement sleep*: It follows the NREM sleep.

It is characterized by the following:

- ✓ The EEG shows increased activity similar to awake state (**beta activity**) along with return of **alpha activity**.
- ✓ Presence of **rapid eye movements**.
- ✓ There is generalized **loss of muscle tone**
- ✓ **Increased rate** of metabolism in brain
- ✓ **Penile erection**, autonomic hyperactivity (increase in pulse rate, respiratory rate and blood pressure)
- ✓ **Dreams**, which can be recalled are seen during REM sleep.

Ponto-geniculo-occipital spikes (large phasic potentials that originate from cholinergic neurons in pons and pass rapidly to lateral geniculate body and then to occipital cortex) are a characteristic feature.

REM sleep is called **paradoxical sleep** because though the EEG is quite similar to awake state, it is quite difficult to awaken the patient.

In an 8-hour sleep, maximum time (around 6 to 6.5 hours) is spent in NREM sleep and the rest (around 1.5 hours) in REM sleep. Most of the stage , NREM occurs in the first one-third of the night whereas most of REM sleep occurs in the last one-third of the night. The REM sleep occurs regularly after every 90-100 minutes with a total of around 5 REM sleeps in the entire night.

EEG rhythms.				
<i>EEG rhythm</i>	<i>Frequency (Hz)</i>	<i>Amplitude (micro volt)</i>	<i>Salient points</i>	<i>Region</i>
Alpha (α)	8-12	50-100	Seen when individual is awake at rest, eyes closed and mind wandering	Present maximally in occipital and parieto-occipital areas
Beta (β)	1 -30	5-10	Normal awake pattern, when attention is focussed beta waves appear	Predominantly in frontal area
Theta (θ)	4 -7	10	Transition from wakefulness to sleep, early sleep	Parietal region and temporal region (hippocampus)
Delta (δ)	1-4	20-200	Deep sleep	

SLEEP DISORDERS

The various sleep disorders can be divided into two categories:

1. Dyssomnias
2. Parasomnias

Dyssomnias

These disorders are characterized by abnormality in the duration or quality of sleep. They include:

A. **Insomnia**: Primary Insomnia is diagnosed when no cause can be found for decreased sleep and may present with difficulty in initiation of sleep, difficulty in maintenance of sleep (frequent awakening during night or early morning awakening) or non-restorative sleep (not feeling refreshed in the morning due to poor quality of sleep). The management usually involves use of benzodiazepines, zolpidem and other hypnotics. Few other disorders which can present with insomnia include:

- **Periodic limb movement disorder**: It is characterized by sudden contraction of muscle groups (usually leg) while sleeping. This results in partial or complete awakening, repeatedly in the night. The patient is usually not aware of these sudden contractions, however the bed partner frequently gets disturbed. The patient may report non-restorative sleep and day time sleepiness. The treatment usually involves benzodiazepines.

- **Restless leg syndrome (Ekbom syndrome)**: It is characterized by uncomfortable sensation in legs (such as insect crawling on the skin) which get relieved by **moving** the leg or **walking around**. This can cause difficulty in initiation of sleep as patient keeps on moving the leg. The only approved drug for treatment is ropinirole (a dopamine agonist).

B. **Hypersomnia**: Primary hypersomnia is diagnosed when no cause can be found for excessive sleepiness which can present with either prolonged sleep episodes or excessive daytime sleep episodes.

Few other disorders which can present with hypersomnia include:

- **Narcolepsy**: This disorder is characterized by the following symptoms:

- a. **Sleep attacks:** The patient has irresistible urge for sleep which can occur at any time during the day.
- b. **Cataplexy:** It is sudden loss of muscle tone, due to which patient can even have a fall.
- c. **Hypnagogic hallucinations:** These are the hallucinations, which occur while going to sleep. Patient may also have **hypnopompic hallucinations** (hallucinations while getting up from sleep).
- d. **Sleep paralysis:** It usually occurs when the patient gets up in the morning. Though he has woken up, he is not able to move his body.

The hallmark of narcolepsy is reduced latency of REM sleep . Normally, it takes around 90 minutes to reach REM sleep (after crossing all the stages of NREM sleep) however in patients with narcolepsy, patient reaches REM sleep much earlier. Narcolepsy is caused by deficiency of **hypocretin**, a neurotransmitter which promotes appetite and alertness. Hypocretin neurons project from **hypothalamus** to other parts of brain.

There is a strong association with **human leucocyte antigens class II** (HLA-DR2 and HLA-DQB1*0602). It has been hypothesized that narcolepsy is an immune mediated disorder , and is caused by destruction of hypothalamic neurons that secrete hypocretin.

The management includes a regimen of forced naps at regular time. The medications used are modafinil and other stimulants like amphetamines.

- **Kleine-Levin syndrome:** This is a rare disorder which is characterized by episodes of **hypersomnia**, hyperphagia and **hypersexuality** (increased sexual activity). In between the episodes patient is essentially asymptomatic.

Parasomnias

These disorders are characterized by dysfunctional events associated with the sleep. These include:

A. **Stage 1, NREM sleep disorders:** These disorders occur during stage 1, NREM (also stage 3, NREM). Since most of the stage 1, NREM is present in first third of the sleep, these disorders are also seen in the same period. Also, the patient is not able to recall the events in the morning. These disorders are usually seen in children and include:

- **Night terror or sleep terror (pavor nocturnus):** The patient suddenly gets up screaming and has symptoms of intense anxiety such as tachycardia and sweating. The patient is not able to recall any dream or reasons for feeling scared.
- **Sleep walking (somnambulism):** The patients may carry out a range of activities for which he doesn't have any memory later on. It may include leaving the bed and walking about and also activities like dressing, moving around or even driving. The person who is having sleep walking is **difficult to awake**, and if awakened, appears confused.
- **Sleep related enuresis:** The enuresis which is defined as voiding of urine at inappropriate places, is nocturnal in around 80% of cases. The most common cause of bed wetting are psychosocial such as sibling rivalry. The treatment of choice is **bed alarms**, which start ringing, as soon as child passes urine. The medications which can be used include tricyclic antidepressants such as **imipramine**, although their use is associated with severe side effects. Intranasal **desmopressin** is a better alternative.
- **Bruxism (teeth grinding):** The patient grinds his teeth making loud sounds and there may be damage to the enamel of teeth.
- **Sleep talking (somniloquy):** Patient talks during stages 3 and 4, NREM and is unable to recall the same in the morning.

In most cases these disorders do not require any treatment and the parents must be reassured. In some cases, benzodiazepines are prescribed. As **benzodiazepines** decrease the duration of stage 4, NREM, they also decrease these episodes.

B. *Other sleep disorders:*

Nightmare: It occurs during REM sleep, wherein patient has a bad dream and gets up scared and has behavioral signs of anxiety such as tachycardia and hypertension. In contrast to night terror, in nightmare, the patient is able to recall the dream

BEHAVIORAL SYNDROMES ASSOCIATED WITH SEXUAL DYSFUNCTION

PSYCHOSEXUAL DISORDER

GENDER IDENTITY DISORDERS

Gender is the sense of being a male or a female. Mostly the gender corresponds to the anatomical sex (i.e. a man with male body organs, also psychologically considers himself as a male). However, there might be a mismatch resulting in gender identity disorder. The following are types of gender identity disorders:

- A. ***Gender identity disorder of childhood:*** It usually manifests in preschool years. The child shows preoccupation with the dress and activities of the opposite sex (e.g. the male child insists on wearing skirts and frocks and may play exclusively with dolls and reject the cars and other toys which are usually preferred by boys). The child expresses the desire to be of the opposite sex and rejects behaviors, attire and attributes of his anatomical sex. Usually, there is no feeling of rejection of the anatomical structures. However, in a small minority it may be present (e.g. the male child may repeatedly assert that the penis and testicles are disgusting and will disappear in due course of time).
- B. ***Transsexualism:*** In adolescents and adults, the symptoms are quite similar to gender identity disorder of childhood. The patients manifest a **desire to live** and be treated as the other sex, usually accompanied by a **discomfort with one's anatomical sex** and a **desire to change** it with the help of a surgery or some other form of treatment. The patient frequently uses the phrases like "I am a man trapped in body of woman" The homosexual orientation is frequently present.
- C. ***Dual-role transvestism:*** The patient wears the clothes of opposite sex, to enjoy the **temporary feeling** of belonging to the other sex. Unlike transsexualism, there is **no desire to permanently change the sex**. There is **no sexual arousal** associated with cross-dressing. (Remember, in fetishistic transvestism, which is a type of paraphilia, the cross-dressing is associated with sexual arousal).

Treatment: In patients who insist for sex change, **sex reassignment surgery** can be done. In a person born anatomically male, removal of penis, scrotum and testes and construction of labia and vagina is done.

In a person born anatomically female, bilateral mastectomy, hysterectomy, removal of ovaries and construction of a neophallus (penis) is done. The hormonal treatment usually accompanies with it.

Disorders of Sexual Orientation

It must be remembered that homosexuality is not a psychiatric disorder

(homosexuality is considered as a normal variant, if it is egosyntonic, i.e. the individual accepts his sexual orientation). However, egodystonic homosexuality (wherein the individual does not accept his sexual orientation and wants to change it) has been classified as a disorder.

Disorders of Sexual Response

Phases of Sexual Response Cycle

Normally, sexual response has been divided into four phases:

1. ***Desire***: It is characterized by a desire to have sex (hypoactive sexual desire disorder is a disorder of this phase).
2. ***Excitement (arousal)***: This phase is characterized by penile erection and vaginal lubrication. Other changes such as nipple erection, enlargement of size of testes and elevation of testes, engorgement and thickening of labia minora and clitoris, and physiological changes like increased heart rate, blood pressure and respiratory rate are also seen. There is an associated subjective sense of pleasure (erectile dysfunction is a disorder of this phase). Another phase called **Plateau phase** is at times described as a separate phase, and is characterized by intensified sexual tensions before orgasm. Excitement phase lasts for several minutes to several hours.
3. ***Orgasm***: There is a peaking of sexual pleasure, followed by release of sexual tension and ejaculation of semen. In females, orgasm is characterized by involuntary contraction of lower third of vagina and contractions from fundus downward to cervix (premature ejaculation and anorgasmia are disorders of this phase). Orgasm phase lasts for 3 to 15 seconds. It is the **shortest phase** of sexual response cycle.
4. ***Resolution***: The body goes back to the resting state. This phase lasts for 10 to 15 minutes. If there is no orgasm, it may last from half to full day.

There are disorders specific to each phase of sexual cycle as described below:

1. ***Sexual desire disorders***: It has been further subdivided into two categories: hypoactive sexual desire disorder, characterized by lack of desire for sexual activity and sexual aversion disorder, characterized by active aversion and avoidance of sexual activity. The only FDA- approved drug for treatment of hypoactive sexual desire disorder in females is **flibanserin**, which got approval in August 2015. Due to risk of severe hypotension, flibanserin should not be taken concomitantly with alcohol.
2. ***Disorders of excitement (arousal) phase***:
 - ***Male erectile disorder (erectile dysfunction)***: It is characterized by recurrent or persistent inability to attain or to maintain the erection required for satisfactory sexual intercourse. Erectile dysfunction is usually

caused by psychological factors, such as anxiety and poor marital relation.

The presence of **early morning erections** and erections during REM sleep (**nocturnal erections**) are suggestive of psychogenic erectile dysfunction.

Investigation such as penile plethysmography and **nocturnal penile intumescence (NPT)** are used to record nocturnal erections.

The physical causes include vascular and neurological disorders like arteriosclerosis and autonomic neuropathy.

Treatment: The medications with best evidence include **PDE-5 inhibitors** (phosphodiesterase-5 inhibitors like **sildenafil**, tadalafil and vardenafil, which facilitate blood flow into penis and enhance erection. The other medications which can be used include oral phentolamine (decreases sympathetic tone and relaxes smooth muscles of corpora cavernosa) and injectable and transurethral alprostadil. **Alprostadil** contains naturally occurring prostaglandin E and, hence has vasodilator action. It can be injected into corpora cavernosa or administered intraurethrally.

Apart from medications, psychotherapy also plays an important role. The most successful is **dual-sex therapy** (or simply sex therapy) which was developed by Masters and Johnson. This therapy treats the "**couple**" and **not the individual**. The couple is taught ways to improve their communication. The couple is also taught exercises which increases the sensory awareness. These exercises are called sensate focus exercises. Initially, the couple is asked to touch, rub, kiss on each others body parts, excluding breasts and genitals (this stage is called nongenital sensate focus). In the next stage, the same activities are done on breasts and genitals (called genital sensate focus). The whole purpose is to make the couple aware that pleasure can be given and received by methods other than sexual intercourse. The sex therapy is effective not only for erectile dysfunction but other sexual disorders like premature ejaculation.

Other techniques, such as behavioral therapy, hypnotherapy and psychoanalysis have also been used.

- **Female sexual arousal disorder:** It is characterized by inability to achieve adequate vaginal lubrication required for sexual intercourse. The management involves use of lubricants during the intercourse.

3. **Disorders of orgasm phase**

— **Premature ejaculation:** It is characterized by a pattern of persistent or recurrent ejaculation with minimal sexual stimulation before or immediately after the vaginal penetration.

The cause of premature ejaculation is usually psychogenic.

Treatment: Specific techniques have been described for the management of premature ejaculation. These include:

- a. ***Squeeze technique*** : When the man gets the feeling of impending ejaculation, the female partner (or the man himself) squeezes the coronal ridge of glans, which results in inhibition of ejaculation.
- b. ***Stop-start technique (Semans technique)***: Here, when the man gets the feeling of impending ejaculation, the sex is stopped for some time and once excitement has decreased, it is restarted.

Apart from these techniques, sex therapy (as described earlier) is also an effective method of treating premature ejaculation.

- SSRIs (selective serotonin reuptake inhibitors) are also frequently used as they can delay the ejaculation
- ***Female orgasmic disorder (anorgasmia)***: It is characterized by recurrent delay or absence of orgasm in females. It is a common sexual disorder in females and the treatment involves psychotherapy.
- ***Male orgasmic disorder (retarded ejaculation)***: It is characterized by recurrent delay or absence of orgasm in males. It is less common than premature ejaculation and is treated with psychotherapy.

Other disorders:

Dyspareunia: It is recurrent or persistent genital pain in either men or women, before, during or after sexual intercourse

Vaginismus: It is involuntary muscle constriction of outer third of vagina which makes penile insertion difficult. Vaginismus and dyspareunia frequently coexist.

Nymphomania: It is the term used to describe excessive sexual desire in females.

Satyriasis: It is the term used to describe excessive sexual desire in males.

MENTAL RETARDATION. CLINICAL MANIFESTATION. THERAPEUTIC AND CORRECTIVE ACTIONS

Oligophrenia is dementia which is congenital or acquired at early stages and manifesting itself by general psychic underdevelopment and intellectual defect. Oligophrenia belongs to personality pathology; it is notable for a stability of the state and no progradency of its course. Oligophrenia is considered as a dysontogeny and regarded as an abnormality manifesting itself by underdevelopment of the personality and the organism at large.

The intelligence is usually measured by calculating the Intelligence Quotient (IQ).

$$\text{IQ} = \text{Mental age} / \text{Chronological age} \times 100$$

In this formula, the maximum denominator is 15, even if assessment of an older individual is being performed. Mental retardation is diagnosed, if the IQ is less than 70.

The morbidity rate of clinical forms of oligophrenia among people with a mental deficiency is as follows: 75 % for debility, 20 % for imbecility and 5 % for idiopathy. As it is seen from the above data, the dominating group consists of people with a mild degree of mental deficiency, which does not hinder a satisfactory, or sometimes even complete social adaptation.

Etiology and pathogenesis. At present, we know about 100 pathogenic factors, which, producing their effect at different stages, are able to affect the process of embryogenesis. On the whole, all the etiological factors, capable of causing psychic underdevelopment, may be conventionally divided into 3 groups:

1) oligophreniae caused by factors of the endogenous origin, i.e. hereditary, as predisposed by a pathology of the parents' sex cells, e.g. Down's syndrome, Klinefelter's syndrome, Turner's syndrome, microcephaly, enzymopathies, etc.;

2) oligophrenia caused by a pathogenic influence during embryo- and foetogenesis, i.e. embryo- and foetopathies (caused by infectious, viral, somatic diseases, hormonal disorders, intoxications, erythroblastosis foetalis, gestoses of pregnancy, etc.);

3) oligophreniae caused by pathologic labour and diseases of early childhood (up to the age of 3 years), i.e. asphyxia, birth injury, neuroviral infections, brain injuries, intoxications, states of clinical death.

Etiology		
Hereditarily	Embryopathy and foetopathies	Pathology of the peri- and postnatal periods
<ul style="list-style-type: none"> ✓ microcephaly ✓ enzymopathic forms of oligophrenia with different hereditary disturbances of metabolism (of proteins, carbohydrates and fats) ✓ due to chromosome aberrations ✓ combination of mental deficiency with a dysplasia of the bone system and skin (dysostotic, xerodermal oligophreniae). 	<ul style="list-style-type: none"> ✓ oligophrenia, caused by rubella at the period of pregnancy; ✓ oligophrenia, caused by other viral infections (cytomegaly, influenza, parotitis, hepatitis); ✓ oligophrenia, caused by toxoplasmosis, listeriosis; ✓ oligophrenia, caused by congenital syphilis; ✓ oligophrenia, caused by hormonal disturbances in the mother; ✓ oligophrenia, caused by rhesus-incompatibility between the mother and the foetus. 	<ul style="list-style-type: none"> ✓ due to rhesus conflict ✓ fetal asphyxiation ✓ related to birth injuries ✓ due to infections, head injury and intoxication of early childhood

Classification of clinical manifestations. The classification of oligophreniae entails some difficulties owing to a variety of its etiological factors and clinical forms. Even by now, no single classification has been made yet. But the most common thing is to separate oligophreniae by the degree of the intellectual defect, since it is principally

important for solving the problem of teaching oligophrenia patients and their social adaptation. According to this classification, there are three degrees of mental deficiency:

- a) debility (it corresponds to a mild degree of mental deficiency in ICD-10);
- b) imbecility (it corresponds to a moderate degree of mental deficiency in ICD-10);
- c) idiocy (it corresponds to a severe degree of mental deficiency in ICD-10).

Besides, there is *a classification of oligophreniae, based on the etiological principle.*

1. Hereditary predisposed metabolic disturbances and chromosomal diseases.
2. Various infections and intoxications, affecting within the period of intrauterine development and the first year of life.
3. Irradiation of pregnant women.
4. Immunological incompatibility of tissues of the mother and foetus.
5. Various malnutritions of the developing organism. Particularly important here is oxygen deprivation of the developing brain.
6. Incomplete pregnancies, mechanical injuries during delivery; to a less degree – caused by contusions of the pregnant women and within the first year of the baby's life.
7. Influence of negative social-cultural factors.

Sukhareva G.Ye. (1965) differentiates oligophreniae by the temporal factor of the effect of some noxious agent. In this connection, all clinical forms of oligophreniae are divided into 3 groups.

1. Oligophreniae of the endogenic origin (they result from involvement of the parents' generative cells). They are subdivided into:
 - a) Down's syndrome (and other oligophreniae caused by chromosomal aberrations);
 - b) true microcephaly;
 - c) enzymopathic forms of oligophrenia with different hereditary disturbances of metabolism (of proteins, carbohydrates and fats);

d) clinical forms of oligophrenia, characterized by a combination of mental deficiency with a dysplasia of the bone system and skin (dysostotic, xerodermal oligophreniae).

2. Embryopathies and foetopathies:

a) oligophrenia, caused by rubella at the period of pregnancy;

b) oligophrenia, caused by other viral infections (cytomegaly, influenza, parotitis, hepatitis);

c) oligophrenia, caused by toxoplasmosis, listeriosis;

d) oligophrenia, caused by congenital syphilis;

e) oligophrenia, caused by hormonal disturbances in the mother;

f) oligophrenia, caused by rhesus-incompatibility between the mother and the foetus.

3. Oligophreniae, caused by a pathology during the delivery and postnatal period:

a) oligophrenia resulting from asphyxia and a birth injury;

b) oligophrenia, caused by a brain injury at the young age (before 3 years);

c) oligophrenia, caused by some neuroinfection at early childhood (meningitis, encephalitis, arachnoiditis).

Besides the above mentioned, still there are also undifferentiated forms of oligophreniae, whose etiological factors have not been studied by now yet.

Clinical manifestations. The clinical picture of oligophrenia is rather heterogeneous owing to a variety of its clinical forms. The main peculiarity of oligophrenia consists in its diffuse “total” underdevelopment, when the whole psyche of the human being is affected: his cognitive activity, emotional-volitional sphere, thinking, memory, attention, speech, motility. A primary defect in the development of more differentiated and ontogenetically younger functions (thinking and speech) with a relative preservation of more ancient functions and instincts is another peculiarity of oligophreniae.

Also, oligophrenia have somatic signs, most frequently manifesting themselves by developmental defects. Widely common are sense organ defects (of vision and hearing), abnormalities in the maxillofacial region (cleft palate and cleft

lip), internal organs (the heart and major vessels, gastrointestinal tract, urogenital system, respiratory organs), developmental defects of the locomotor system (contractures and dislocations of joints), vertebral pathologies, syndactylies, oligo- and polydactylies, etc. No specific neurological picture in oligophrenia is observed, but, as a rule, there are signs of diffuse symptoms: changes from the part of reflexes, hypotony, blepharoptosis, strabismus, slight pareses, etc.

<i>Category</i>	<i>IQ</i>	<i>ICD 10</i>	<i>Class</i>	<i>Mental age as adults</i>	<i>Educational achievement</i>	<i>Life</i>	<i>Work</i>
Mild form	50-69	F 70	Educable	9-12 yrs	Up to 6th class	Independent living	Unskilled or semi-skilled work
Moderate form	35- 49	F 71	Trainable	6-8 yrs	Up to 2nd class	Needs support	Unskilled or semi-skilled work
Severe form	20-34	F 72	Dependent	3-6 yrs	No formal education	Needs attention	Simple task-under supervision
Profound form	<20	F 73	Needs life support	< 3yrs	No formal education	Needs continuous supervision	None

Mild form (Debility) of mental deficiency with IQ of 50-69 is characterized by insufficiently developed abstract-logic thinking, an inability to separate the main from the minor; with good mechanical memory the thinking remains concrete, but the creative thinking is absent at all. The speech is poor, primitive, stereotyped; the morons may master humanitarian subjects at school, but demonstrate their complete insolvency in studying exact sciences. They are able to study only by the syllabus of an auxiliary school, master simple labour skills, orientate themselves well in everyday problems. They may make families, keep house, and have complete social adaptation.

Moderate form (Imbecility) of mental deficiency with IQ of 35-49. The thinking of imbeciles is concrete and stiff, the speech is poor and inarticulate, the vocabulary

stock is limited by 20-30 household words. The perception, memory and attention are essentially underdeveloped. Imbeciles are not able to study and master the syllabus of an auxiliary school, but master skills of service and simple physical actions, they may learn to write and count to 10; they are not independent in behaviour at all and need guardianship. Like morons, imbeciles are easily suggestible, may come under the influence of some criminal companies and even become accomplices in crimes.

Severe form of mental deficiency with IQ of 20-34. Attainment of conceptual skills is limited. The individual generally has little understanding of written language or of concepts involving numbers, time and money. Spoken language is limited in terms of vocabulary and grammar. This people need supervision at all times. The individual cannot make responsible decisions regarding well-being of self or others. Maladaptive behavior, including self-injury, is present in significant minority.

Profound form (Idiocy) of psychic underdevelopment with IQ not more than 20. The thinking and speech are absent. Such patients produce only some inarticulate sounds, which, as a rule, are caused by instinctive reactions (hunger). The emotions are lower, primitive and entail satisfaction or dissatisfaction of instincts; eating of inedible things is observed. Idiots would not react to their relatives, do not recognize their mother, are not able to serve themselves and control their physiological functions. They absolutely need care, guardianship and supervision. The psychological defect, as a rule, is combined with an expressed systemic pathology and severe neurological symptoms (pareses, palsies), therefore they hardly live up to the age of 16-20 years.

Differentiated forms of oligophrenia include nosologically independent diseases, where an intellectual defect is one of the most severe symptoms. There are 3 groups of such disorders:

1) endogenously caused forms of oligophrenia - are hereditary forms, when an intellectual defect is caused by chromosomal aberrations and metabolic defects (*Down's syndrome, Turner's syndrome, Klinefelter's syndrome, X trisomy, Phenylketonuria, Homocystinuria, Hurler's syndrome (gargoylism)*).

2) exogenously caused forms of oligophrenia; The syndrome of alcoholic foetus appears if a pregnant woman abuses liquor. It manifests itself by a retardation in the physical development, an intellectual defect, more often of a mild degree (*Rubeolar oligophrenia, Oligophrenia in congenital syphilis, Oligophrenia, caused by listeriosis, Oligophrenia, caused by toxoplasmosis, Oligophrenia, caused by erythroblastosis foetalis, Oligophrenia, caused by pathologic labour (asphyxia, birth injury), Oligophrenia caused by postnatal factors, Mixed endogenously-exogenously caused*

forms of oligophrenia, Microcephaly, True microcephaly, Secondary microcephaly, Hypothyroid oligophrenia (cretinism), Craniostenosis)

3) mixed endogenously-exogenously caused forms of oligophrenia.

Down's syndrome results from a trisomy of the 21st pair of chromosomes, its morbidity rate among newborns is 1 per 700-1,000 cases, a risk of giving birth to a child with Down's syndrome significantly increases in those women who bear late (after the age of 40 years). An expressed intellectual defect, more frequently to the extent of imbecility or idiocy, significantly rarer to the extent of debility, is one of the main clinical manifestations of this syndrome. Typical is the complex of physical abnormalities, which makes the patients resembling one another: a small nose with a wide flattened bridge, an oblique shape of the eyes, small, deformed and low helices, a high "Gothic" palate, a "geographic" tongue. Developmental defects in the cardiovascular system and other organs are often revealed. Such patients are unable to study, need care and guardianship.

Turner's syndrome occurs in females, its morbidity rate is 0.3 per 1,000 newborn girls. Its clinical manifestations are seen at birth. The patients have a small weight and body length, a short and wide neck with a low growth of hair, a peculiar shape of the eyes, an epicanthus, a "sphinx's face". Skeletal deformities and internal organ abnormalities are observed. The intellectual defect is not sharply expressed, there is a level of some borderline mental deficiency or a mild degree of debility, seldom to the degree of imbecility.

Klinefelter's syndrome is observed in males with an additional X chromosome. The patients have a peculiar type of habitus: a large stature, narrow shoulders, a flat thorax, long extremities, weak muscles, underdevelopment of sex organs with resultant infertility. The intellectual defect is more often at the degree of debility.

X trisomy is observed in girls and women. Dysplastic signs, a retardation of physical development and a mild mental deficiency are observed. The fact that among X trisomy patients there are a lot of schizophrenics is worth of attention.

Phenylketonuria: the infants are born healthy, but owing to a deficit of the enzyme, which turns an amino acid phenylalanine into tyrosine, by the age of 3-6 months the infant develops a specific musty smell of urine, plumpness, listlessness, sleepiness, some delay in the psychomotor development; the intellectual defect may reach to the level of imbecility or idiocy.

Homocystinuria results from metabolic disturbances of methionine. Clinically it resembles Marfan's syndrome (a dysplastic form of the trunk), the intellectual defect is on the level of debility or mild imbecility.

Hurler's syndrome (gargoylism) belongs to mucopolysaccharidoses. The patients' appearance is peculiar: their body length is significantly less of the age norm, the head is relatively large, the neck is actually absent, the features are grotesque, the bridge of the nose is sunken, the lips and tongue are thick, the nostrils are turned out, the ears are low. An intellectual defect forms gradually, reaching to an absolute degradation by the age of 10-12 years and ends with a lethal outcome.

Exogenously caused forms of oligophrenia. The syndrome of alcoholic foetus appears if a pregnant woman abuses liquor. It manifests itself by a retardation in the physical development, an intellectual defect, more often of a mild degree.

Rubeolar oligophrenia is an embryopathy caused by an effect of the rubella virus during the first trimester of pregnancy. An expressed intellectual defect is accompanied by severe developmental defects: of the organs of vision and hearing, locomotor system, heart.

Oligophrenia in congenital syphilis: an intellectual defect is accompanied by neurologic symptoms and various developmental abnormalities (Hutchinson's triad).

Oligophrenia, caused by toxoplasmosis, is characterized by mental deficiency with developmental defects of vision, convulsive seizures, hydrocephaly, microcephaly, spastic pareses and palsies.

Oligophrenia, caused by listeriosis, results from having intrauterine meningoencephalitis of this kind. An expressed intellectual defect is accompanied by psychoorganic disorders.

Oligophrenia, caused by erythroblastosis foetalis, develops because of rhesus-incompatibility between the mother and the foetus: the rhesus-negative mother and the rhesus-positive foetus. The resultant haemolysis affects the cerebral cortex and basal ganglia of the cerebral hemispheres. The clinical picture is characterized by various degree of mental deficiency, defects of hearing, pareses, palsies, extrapyramidal disorders.

Oligophrenia, caused by pathologic labour (asphyxia, birth injury), results from cerebral hypoxia or intracranial haemorrhages. Along with a differently expressed intellectual defect (from debility to idiocy) there are various neurological symptoms (unexpressed forms of infantile cerebral paralysis, convulsive seizures, disturbances of

innervation) and psychoorganic manifestations (motor disinhibition, cerebrasthenic phenomena, explosiveness).

Oligophrenia caused by postnatal factors. The pathogenic factor may be represented by neuroviral infections, brain injuries, intoxications suffered within the first 3 years of life. As a rule, no congenital abnormalities and dysplasiae are observed; the intellectual defect chiefly depends upon the degree of expressiveness and localization of an organic lesion of the brain and may vary from a mild grade of debility to idiocy. Various neurological disorders and disturbances at the psychoorganic level are observed.

Mixed endogenously-exogenously caused forms of oligophrenia develop as a result of some interaction of a genotypic failure and hazardous environmental factors.

Microcephaly is one of the most common forms among oligophrenics, who suffer from severe forms of mental deficiency (imbecility and idiocy).

True microcephaly is a hereditary predisposed form, mostly characterized by some mental underdevelopment without any neurological symptoms. The size of the cerebral skull is significantly smaller, the forehead is flattened, the helices are enlarged, the nose is prolonged.

Secondary microcephaly clinically differs from the true form by absence of an expressed difference in the size of the facial and cerebral skull, presence of neurological symptoms and convulsive seizures. It is characterized by the most severe grade of mental deficiency.

Hypothyroid oligophrenia (cretinism) results from hypoplasia or an absolute absence of the thyroid gland. An intellectual defect develops at the postnatal period; with an opportune diagnosis and replacement therapy it may be prevented. Untreated hypothyroidism gives rise to the most severe grade of mental deficiency. The patient's appearance is peculiar: his large tongue does not have enough place in the mouth, the bridge of the nose is sunken, the face is yellowish-sallow, the skin is dry, the hair is fragile.

Craniostenosis is a premature closure of cranial bones in newborns with disturbances in the growth and development of the brain, accompanied by an involvement of the central nervous system and formation of an intellectual defect.

Course. Till now, the main criteria of oligophrenia are as follows:

1) totality of mental underdevelopment with prevalence of weak abstract-logic thinking and lower expressiveness in disturbances of the intellect prerequisites and a relatively less severe underdevelopment of the emotional sphere;

2) nonprogradiency of the intellectual deficiency, as well as nonprogradiency of the pathological process which caused this underdevelopment.

But current achievements of medicine demonstrate correctness of these criteria only for certain forms, but not all the states, which are now regarded as oligophrenia. The study of etiology and pathogenetic mechanisms of certain forms of mental deficiency creates some possibilities for preventing the development of an intellectual defect or its progression. Such forms of oligophrenia as phenylketonuria, homocystinuria, gargoylism, other forms of mucopolysaccharidoses may serve as an example. The same thing concerns a number of exogenously caused forms of oligophrenia (pathologic labour, postnatal hazards).

Not a bit part in the positive dynamics of some forms of oligophrenia (as a rule, debility) is played by the proper upbringing and teaching of oligophrenics. Such a maximally organized approach contributes, though slowly, to an increase of their intellectual functions, motility of psychic processes, acquiring some stock of knowledge, development of the oral speech, reduction of locomotor insufficiency. Such people become able to work, and some of them acquire an absolute social adaptation. But the positive dynamics of oligophreniae may be broken by decompensation states, a leading part in their development being played by additional exogenous hazards (infections, intoxications, injuries, emotional overstrains, excessive demands) and periods of crises (oftener that of puberty, sometimes parapuberty). Decompensations are accompanied by worsening intellectual functions, appearance of cerebrastrhenic, autonomovascular and convulsive manifestations, psychopathy-like forms of behaviour.

Besides, psychopathic decompensations also exist, they usually develop at the period of puberty and are termed as oligophrenic psychoses. They chiefly manifest themselves by affective disorders (depression with anxiety and fear, dysphoriae), twilight states of consciousness, rudimentary hallucinatory and delusional feelings, catatony-like states.

The treatment of oligophreniae should be complex, including medicamental, psychologopedagogical measures and those of upbringing. It is very important to start treatment in time. The drug therapy of oligophrenia is of a symptomatic character. Nootropic medicines (pantogam, Noophen, nootropil, aminalon, cerebrolysin) are used for improving metabolic processes in the brain, as well as dehydrating drugs (magnesium sulphate, furosemidum, Mannit) and those with a resolving effect. If there

are paroxysmal disorders, anticonvulsants are administered; oligophreniae, complicated by a psychopathy-like or neurosis-like syndrome, require using neuroleptic drugs (Neuleptil, sonapax) in the first case, as well as tranquillizers and antidepressants (tazepam, phenazepam, hydazepam, SSRI) in the second one. In phenylketonuria, a special diet which excludes any foodstuffs containing phenylalanine, is administered. For hypothyroid oligophrenia, substitution therapy with thyroid hormones is indicated.

Very important in oligophrenia are measures of upbringing and correction. Auxillary schools, directed at professional orientation and labour adaptation of people with a mild degree of mental deficiency, serve this purpose. Patients with imbecility and idiocy need care and guardianship.

Age-specific peculiarities. The main signs of some psychic underdevelopment usually become evident from the moment of the baby's birth or during its first year of life. As it was mentioned above, the crises of puberty and parapuberty may cause negative dynamics and decompensation states in the course of certain forms of oligophrenia. Besides, it should be noticed, that the lifetime of patients with severe forms of oligophreniae significantly depends upon the severity of developmental abnormalities of their internal organs. Patients with idiocy may live up to 20 years, those with imbecility up to 40 years.

The outcome of oligophrenia directly depends upon its clinical form and the level of an intellectual defect. In mild forms of debility it is possible to observe "evolutionary" dynamics and absolute social adaptation; severe forms of oligophrenia (imbecility and idiocy) have an unfavourable prognosis and outcome.

Borderline forms of intellectual deficiency (a delayed rate of psychic development). This group of disorders include the states manifesting themselves by a mild degree of intellectual deficiency and taking an intermediate place between the intellectual norm and oligophrenia. The intellectual quotient (IQ) in these forms of disorders is 71-80. This is a rather versatile and heterogeneous group of disorders by both the etiological sign together with pathogenetic mechanisms and clinical manifestations together with an outcome. This is one of the commonest forms of psychic pathology in children. The urgency of these disorders nowadays is rather high, since their social significance is great. An opportune diagnosis and medical-corrective measures contribute to disappearance of clinical manifestations and create conditions for an absolute social adaptation of such people.

The epidemiology of borderline mental deficiency has not been established yet. It is caused by the fact that there are no clear clinical criteria for diagnosing this pathology. The intellectual quotient, as it is known, cannot fully reflect the level of

psychic underdevelopment, especially as a significant part here is played by the social criterion. Borderline mental deficiency in children becomes noticeable at the age of 6 years, within the period of their preparation for school, and is finally revealed in young pupils. The statistic data concerning the morbidity rate of borderline mental deficiency are rather contradictory and have a broad range: from 2 % to 12 %.

Classification of clinical manifestations. According to the systematization, based on the pathogenetic principle, all forms of borderline mental deficiency are divided into 4 groups:

1) dysontogenetic forms, where the deficiency is caused by the mechanisms of some delay or distortion in the child's psychic development;

2) encephalopathic forms based on an organic lesion of cerebral mechanisms at early stages of ontogenesis;

3) intellectual deficiency related to defects of analysers and sense organs (action of sensory deprivation);

4) intellectual deficiency related to defects of upbringing and information deficit from the early childhood.

Etiology and pathogenesis. The etiology of borderline mental deficiency is various just as the etiology of oligophrenia. Along with noxious factors, producing their effect within the perinatal and early postnatal periods, sociocultural factors are important too. The pathogenesis of borderline mental deficiency is based on the dysontogenesis and chronogenic factor, with a resultant immaturity of different areas of the brain, their dysregulation and functional insufficiency.

The treatment of children with borderline mental deficiency should include drug preparations directed at improving haemodynamics and biochemical processes in the brain, as well as corrective measures of the pedagogical level. Children with different clinical forms require an individual approach and special programmes for studying. Upbringing influences and sanitation of the social sphere of a sick child are important too.

DEMENTIA

(IN NEURODEGENERATIVE DISEASES)

Dementia is defined as a progressive impairment of cognitive functions in the **absence of any disturbances of consciousness**. The prevalence of dementia increases with age, with prevalence of around 5% in the population older than 65 years and prevalence of 20-40% in the population older than 85 years. The underlying cause of dementia can be permanent or reversible.

The main symptoms of dementia:

A. Cognitive impairment: The cognitive impairment is characterized by 4 A's: **amnesia, aphasia, apraxia and agnosia**.

1. Amnesia refers to the memory impairment. Initially there is loss of recent memory, which is followed by loss of immediate memory and lastly the remote memory is lost. Another way of describing memory impairment is in terms of episodic (memory for events), semantic memory (memory for facts such as rules, words and language) and visuospatial deficits. In episodic memory, there is a gradient of loss with more recent events being lost before remote events. Semantic memory is preserved in the early course of disease and is gradually lost as the disease progresses. Visuospatial skills deficits manifests with symptoms of disorientation in strange environments and later, wandering and getting lost in even familiar environments.

2. Aphasia refers to the disturbances of **language function**. The initial disturbance is usually "word finding difficulties" which gradually progresses to more severe abnormalities.

3. Apraxia is inability to perform learned motor functions. For example, patient may start having difficulties in functions like buttoning the shirt or combing the hair.

4. Agnosia is inability to interpret a sensory stimulus. One of the common disturbance is "prosopagnosia"⁰ which is inability to identify the face. At times patient may be unable to identify his own face, a condition known as "autoprosopagnosia"

- Apart from the 4 A's, disturbances in executive functioning (i.e. planning, organizing, sequencing and abstracting) is another important cognitive impairment.

B. Behavioral and psychological symptoms: These may include:

1. Personality changes: There might be a significant change in the personality. Patient may become introvert and seem to be unconcerned about others or patients may become hostile. The personality changes are mostly seen in patients with frontal and temporal lobe involvement.

2. Hallucinations and delusions: Delusion mostly seen is delusion of persecution and delusion of theft.

3. Depression, manic and anxiety symptoms.
4. Apathy, agitation, aggression, wandering and circadian rhythm disturbances.
5. *Catastrophic reaction*: The subjective awareness of intellectual deficits while in a stressful situation may result in an emotional outburst in a patient of dementia. This is known as “**catastrophic reaction**”.

C. Focal neurological signs and symptoms: These are usually seen in vascular dementia (multi-infarct dementia) and correspond to the site of vascular insults. These include exaggerated tendon reflexes, extensor plantar response, gait abnormalities, etc.

Types

The dementia can be divided into reversible and irreversible dementias. It is extremely important to do detailed work up of a patient of dementia as around 15% of cases are reversible.

The reversible causes of dementia are:

- A. Neurosurgical conditions (subdural hematoma, normal pressure hydrocephalus, intracranial tumors, intracranial abscess).
- B. Infectious causes (meningitis, encephalitis, neurosyphilis, lyme disease).
- C. Metabolic causes (vitamin B12 or folate deficiency, niacin deficiency, hypo and hyperthyroidism, hypo and hyperparathyroidism).
- D. Others (drugs and toxins, alcohol abuse, autoimmune encephalitis)

Subtypes and causes of dementia			
Typ	Common	Less common	Rare
Vascular	Diffuse small- vessel disease	Amyloid angiopathy Multiple emboli	Cerebral vasculitis Systemic lupus erythematosus
Inherited	Alzheimer`s disease	Fronto-temporal dementia Leukodystrophies Huntington`s diseas Wilson`s disease Distrophia myotonica	Mitochondrial encephalopathies Cortico-basal degeneration

		Lewy body dementia Progressive supranuclear palsy	
Neoplastic	Secondary deposits	Primary cerebral tumor	Paraneoplastic syndrome (limbic encephalitis)
Inflammatory		Multiple sclerosis	Sarcoidosis
Traumatic	Chronic subdural haematoma Post-head injury	Punch-drunken syndrome	
Hydrocephalus		Communicating/non-communicating “normal pressure” hydrocephalus	
Toxic/nutritional	Alcohol	Thiamin deficiency Vitamin B12 deficiency	Anoxia/carbon monoxide poisoning Heavy metal poisoning
Infective		Syphilis HIV	Post-encephalitis Whipple`s disease Subacute sclerosing panencephalitis
Prion diseases		Sporadic Creutzfeldt-Jacob disease (CJD)	Variant CJD

Dementia can also be classified into cortical and subcortical types depending on the area of brain which is affected first by the dementing process.

Cortical dementias: These disorders are characterized by early involvement of cortical structures and hence early appearance of cortical dysfunction. These disorders have early and severe presentation of the As: amnesia, apraxia, aphasia, agnosia and acalculia (impaired mathematical skills) indicating cortical involvement. **Alzheimer's disease** is the prototype of cortical dementia. Others include Creutzfeldt-Jakob disease, Pick's disease and other frontotemporal dementias.

Subcortical dementia: These disorders are characterized by early involvement of subcortical structures like basal ganglia, brain stem nuclei and cerebellum. These disorders are characterized by early presentation of motor symptoms (abnormal movements like tics, chorea, dysarthria, etc.), significant disturbances of executive functioning and prominent behavioral and psychological symptoms like apathy, depression, bradyphrenia (slowness of thinking). The examples include Parkinson's disease, Wilson's disease, Huntington's disease, multiple sclerosis, progressive supra nuclear palsy, normal pressure hydrocephalus.

Some dementias such as vascular dementia, dementia with lewy body have mixed presentation.

Alzheimer's disease:

Is dementia, Alzheimer's type, one of the most common form of primary degenerative dementia in old age, which is characterized by a gradual hardly noticeable beginning in presenile and senile age, a steady progression of disorders of memory and higher cortical functions until the total collapse of the intellect and mental activity in general, as well as the characteristic complex of neuropathological features.

Senile dementia involves 5-10 % of all people older 65. With an increase of age in the presenile age groups the risk of development of senile dementia rises. Among the patients with senile dementia there are twice more females than males.

The total amount of funds needed for the care of dementia patients has increased rapidly over the last decade, which was the result of increasing the number of affected persons with retarded diseases. Thus, the AD is not only a major cause of adverse health status of society, but also a significant financial problem, the value of which will increase further in the coming years.

The modern classification of Alzheimer's disease is based on the principle of age. According to the ICD 10th Revision (1992) is divided into three clinical types:

1) F00.0 AD with early onset (synonyms: type 2 Alzheimer's disease, presenile dementia Alzheimer's type) develops mainly in presenile age, accompanied by a steady progression of memory disorders, intellectual activity and higher cortical functions, and leads to the development of total dementia with severe speech disorders, praxis and optico-spatial activity (afato-apracto-agnostic dementia). The structure of dementia syndrome and the main clinical characteristics of the disease corresponds to that one which was described for the first time by A. Alzheimer (1906) and received his name later, ie, BA itself (here in after referred to as presenile AD).

In the majority of cases of presenile AD (from 75 to 85%), the disease begins between the ages of 45 to 65 years, but may be earlier (about 40 years) and later - 65 - the beginning (10-15%) of cases. The average age of patients of the onset varies according to various estimates from 54 to 56 years. The mean duration of illness of 8 - 10 years; however, may also be more prolonged (more than 20 years), and during a catastrophic progress of the disease - from 2 to 4 years.

2) F00.1 Alzheimer's disease with late onset (synonyms: type 1 Alzheimer's disease, senile dementia of Alzheimer's type). The disease begins in the vast majority of cases in the senile, or (less often) the elderly age with subtle memory impairment, general intellectual decline and personal changes, in the future at a steady progression develops total dementia, amnesic type, accompanied by a general decline in higher cortical functions, which (unlike presenile AD) relatively rarely reach degree of severe focal cortical disorders. From 75 to 85% of the cases of senile dementia of the Alzheimer type starts between 65-85 years, although early preclinical symptoms in a small portion can be detected earlier cases 60. The duration of the disease varies from 4 to 15 years or more.

3) Also highlighted: F00.2 Atypical Alzheimer's disease or dementia of a mixed type, characterized by a combination of manifestations characteristic for AD, as well as for vascular dementia.

Clinical manifestation

The course of the disease is traditionally distinguished by three main stages: mild, moderate and severe dementia. Sometimes emit 2 additional stages in the pre-clinical stage and the stage of moderate-severe (intermediate between moderate and severe).

The preclinical stage is characterized by initial signs of memory and intellectual decline (so-called questionable dementia by Berg L. et al., 1993) in the form of a permanent mild forgetfulness to incomplete events, little difficulties in determining the temporal relationship and mental preservation to operations or only a slight

deterioration in social or occupational functioning at full preservation of everyday kinds of activities. Already at this stage simple praxis disorders appear, personality changes according to the type of accentuation or leveling personal characteristics, as well as reducing mental activity. In this most early stage of development of the disease patients are usually unable to hide or compensate for their existing disorders.

At the stage of "soft" dementia, memory disorders (especially on current events) are amplified and become obvious to others, patients have difficulties in chronological order, as well as the geographical orientation. There are obvious difficulties in cognitive operations, with particular disorders of abstract thinking, generalization capabilities, judgment, comparison. Patients can no longer independently perform financial transactions, maintain correspondence, travel, although still retain the ability to self-care and to a considerable extent - to independent living. Presenile AD disorders of higher cortical functions (speech, praxis, optic-spatial activities) at the stage "mild" dementia reach a clearly defined. Senile unlike presenile type of the disease will debut exclusively amnesic disorders. Recently, often combined with changes in personality according to the type of so-called trans-individual (senile) restructuring of the personality structure or (rarely) or psychotic type as a sharp, often grotesque sharpening patient personality traits. Only in extremely rare cases at the beginning of the disease, there is a clear reducing of mental activity.

More than a third of patients with early-onset at the stage of mild dementia revealed affective disorders, often in the form of chronic hypothymic affect and (or) subdepressive reactions to its own insolvency or stressful situations associated with the disease. Often subdepressive symptoms are combined with anxiety, hysteroform or hypochondriacal disorders. Delusional disorder in the form of episodic protracted delusions or damage, theft, at least - the ideas of reference, persecution or jealousy are detected in the early stages of the disease in about a quarter of patients. More than half of patients with senile type AD at the stage of "mild" dementia find episodic or more persistent little developed and unsystematic delusions, often in the form of petty nonsense particular theft, damage, petty harassment directed against people from the inner circle of patients. In contrast, patients with senile AD patients comparing to presenile type of disease are characterized by long-term preservation of the basic personality characteristics, the presence of a sense of inferiority or changes and even adequate emotional response to the disease.

On the stage of moderate dementia, amnesic syndrome in combination with impaired higher cortical functions specific to defeat the temporo-parietal brain regions, ie dysmnnesia symptoms, dysphasia, dyspraxia and disgnozia is typical. At this stage, there are marked memory disturbances, concerning both the possibility of acquiring new

knowledge and memory of current events and playback of past knowledge and experience, in gross violation of orientation in time, and often in the environment. Patients can no longer cope alone with any professional or public duties. Patients are available only to a simple routine work at home, their interests are very limited, need constant support and help, even in self-service. For patients with senile amnestic type of AD is characterized by disorientation, the phenomenon of "the shift of the situation in the past," ie, with morbid revival of memories of the distant past and the false recognition of others that patients take for people from your past.

At this stage in patients with presenile type of AD, there are various neurological symptoms: increased muscle tone, single seizures (abortive and generalized), Parkinson-like disorder (akinetic-hypertonic) amniostatic or dissociated neurological syndromes: stiffness without rigidity, amimia without general akinesia, isolated gait disorders, as well as various hyperkinesis, often choreo-like and myoclonic.

At the stage of severe dementia condition (depending on the type of the disease) is characterized by the total collapse of dementia with deep memory disturbances, total fixation amnesia and amnestic disorientation. Patients completely lose the idea of time and the environment and have a very meager idea of themselves. The severity of the collapse of intelligent functions such that patients almost completely lose the ability to judgment and reasoning, verbal communication, as well as psychomotor skills. They are not capable of independent existence, and need constant care and supervision.

At that stage of severe dementia, neurological symptoms reach maximum severity. In type senile AD is presented by subcortical disorders, usually in the form of so-called senile and senile tremor gait change, which becomes mincing and shuffling. When senile AD, even at the stage of the initial state does not have the rough of neurological disorders (grasping and oral automatisms, amniostatic syndromes or hyperkinesis) which is typical for the final stage of presenile AD.

At the final stage of severe dementia (final or initial state) all mental activities are destroyed with severe neurological disorders, multiple violent motor phenomena, automatism and primitive reflexes, violent grimace of weeping and laughter, sometimes - seizures, as the development of a forced ("embryonic") posture and contracture. In patients with severe senile dementia the final stage is usually formed after the addition of a somatic pathology, most commonly pneumonia. Against this background, developing rapidly cachexia, severe degenerative disorders and fetal posture.

Relatively often against a background of symptomatic dementia (mild and severe) having psychotic disorders (the state of confusion, stage hallucinatory experiences, reduced delirious and delirious-amential syndromes), and behavioral disorders (aggression, restlessness, anxiety, violent cries, jet lag and etc.). Usually psychotic disorders develop when joining other exogenous factors - often against the background of systemic diseases, or after surgery, trauma, drug or other intoxication and even as a result of traumatic experiences or a sharp change of life stereotype.

Pathophysiology: The classical gross neuroanatomical finding in Alzheimers disease is diffuse atrophy with flattened cortical sulci and enlarged cerebral ventricles.

Typically, atrophy behind in medial temporal lobes before spreading to lateral and medial parietal and temporal lobes and lateral frontal cortex. At autopsy, the earliest and most severe degeneration is found in medial temporal lobe (entorhinal/perirhinal cortex and hippocampus), lateral temporal cortex and nucleus basalis of meynert.

The classical microscopic findings are neuritic (senile) plaques and neurofibrillary tangles. Senile plaques, also referred to as amyloid plaques are composed of a particular protein $A\beta$. This protein is derived from amyloid precursor protein (APP) by the action of β and γ -secretase enzymes. The $A\beta$ protein combines to form fibrils. The senile plaques are extracellular deposits of $A\beta$ and are found in all cortical areas and also in striatum and cerebellum. The amyloid β -peptide not only deposits in the brain parenchyma in the form of amyloid plaques but also in the vessel walls in the form of cerebral amyloid angiopathy (CAA).

The senile plaques can also be seen in elderlies who do not have Alzheimer's and their number increases with age. Hence senile plaques are not specific for Alzheimer disease. The amyloid plaques are not correlated with the severity of dementia.

The neurofibrillary tangles (NFTs) are intraneuronal aggregates of tau protein. The tau protein present in tangles is in a highly phosphorylated form and has abnormal functioning. Normally, tau protein binds and stabilizes microtubules, which are essential for axonal transport, however in Alzheimer's this function is deranged. The neurofibrillary tangles are widely distributed in cortical structures and hippocampus, but always spare cerebellum. Multiple studies have established that amount and distribution of NFTs correlates with the duration and severity of dementia. The levels of phosphorylated tau protein are also increased in CSF, and it is being studied as a possible biomarker for Alzheimer disease.

Both senile plaques and neurofibrillary tangles can be present in elderlies without any dementia. However in patients with dementia, these findings are extensive and wide spread. The neuropathological diagnosis of Alzheimer disease requires extensive presence of both senile plaques (extracellular deposits) and neurofibrillary tangles (intracellular inclusions).

Genetics: Alzheimer's disease has shown linkage to chromosome 1, 14 and 21. A small number of cases of Alzheimer disease are early onset and familial and are inherited in autosomal dominant fashion. Mutations in three genes, amyloid precursor protein (chromosome 21), presenilin-1 (chromosome 14) and presenilin-2 (chromosome 1) have been found in most cases with familial Alzheimer's disease. The majority of cases are however sporadic and late onset. *Apo E4* gene is associated with the risk of development of Alzheimer's disease, however its testing is not recommended as it is neither sensitive nor specific for Alzheimer's disease.

Diagnostics

In accordance with diagnostic recommendations developed by international expert groups, including NINCDS-ADRDA (McKhan GD et al., 1984), DSM-IV (APA, 1994), CERAD (Mirra SS et al., 1994) and approved by the WHO International classification of diseases 10 th revision of intravital diagnosis of Alzheimer's disease based on the presence of obligate following characteristics:

The presence of dementia syndrome:

- The development of multiple cognitive deficits, which is determined by a combination of the deterioration of memory disorders (memorizing new and / or playback previously assimilated information) and the presence of symptoms of at least one of the following cognitive disturbances: aphasia (impaired speech function); apraxia (impaired ability to carry out motor activities despite undisturbed motor function); agnosia (inability to recognize or identify objects despite intact sensory perception); infringement of intellectual activities (planning, programming, abstraction, establishing cause-effect relationships);

- Reduction of social or professional adaptation of the patient as compared to its previous level due to impairment and cognitive functions;

- The course is characterized by gradual hardly noticeable beginning of a steady progression and memory impairment and other cognitive functions;

- There is no evidence of clinical paraclinical studies, which may indicate that the disorder of memory and cognitive functions caused by another disease or damage to the central nervous system (eg, cerebrovascular disease, Parkinson's disease or Pick's, Huntington's disease, subdural hematoma, hydrocephalus and etc.); systemic disease, which is known that it can cause dementia syndrome (hypothyroidism, deficiency of vitamin B12 or folic acid hypercalcemia, neurosyphilis, HIV infection, severe organ failure, etc..) or state of intoxication (including medical);

- Signs of these cognitive deficits should be identified outside the conscious disorder states;

- A history information and data from clinical trials exclude connection of cognitive disorders with some other mental illness (such as depression, schizophrenia, mental retardation and others.).

Pick`s disease

Pick`s atrophy was described by A. Pick in the end of the 19th century. Usually, it begins gradually at the age of 40-65 years. Particularly often its first manifestations appear at 55-60. The initial stage of Pick`s atrophy, unlike Alzheimer`s disease, is characterized by prevalence of emotional-volitional disturbances, rather than those of the intellectual-mnemonic sphere. Particularly typical is lack of spontaneity: indifference, passiveness, absence of any inner drives for activity with preservation of a capacity for actions under the influence of external stimuli. Rarer is a syndrome clinically resembling the picture of progressive paralysis in the form of a reduced moral-ethic level of the personality, carelessness, euphoria, disinhibited drives, uncritical attitude to one`s own behaviour (the pseudoparalytic syndrome).

One of the differences of Pick`s atrophy from Alzheimer`s disease lies in the prevalence of an increasing intellectual insufficiency (weakening of abilities to generalize and abstract, form adequate judgements and conclusions, reveal causal relationships) over memory disturbances. Expressed abnormalities of the memory appear late, amnesic disorientation is absent. Hallucinatory-delirious symptoms and epileptiform seizures develop significantly more seldom than in case of Alzheimer`s disease. In Pick`s atrophy, the leading place among manifestations of the total mental deficiency is taken by speech disturbances, while disturbances of gnosis and praxis characteristic of Alzheimer`s disease are expressed significantly rarer. Speech disturbances, beginning from difficult understanding of somebody`s speech, a semantic and grammatical simplification, impoverishment of one`s own speech, with time turn into speech helplessness. The speech becomes saturated with perseverations and echolaliae, it gradually loses its phrase character, comes to a meaningless repetition of the same word combinations and words (a “stagnant” symptom typical just for Pick`s atrophy). Later, mutism comes. Some cases develop marasmus. The patients die from secondary infections 5-6 years after the onset of the cerebral-atrophic process of mental deficiency.

Diagnosing of presenile dementiae is based on the appearance of a progressing total dementia in the presenile age. An earlier revealing of intellectual-mnemonic disorders and disturbances of the higher cortical activity typical for these diseases is facilitated by

use of experimental-psychological methods. Diagnostically significant are pneumoencephalography and computed tomography which find out cerebral atrophy, internal hydrocephaly and dilation of cerebral ventricles. Differentiation of Alzheimer's disease and Pick's atrophy takes into consideration their above clinical peculiarities and differences in the localization of the cerebral atrophic process revealed with help of pneumoencephalography and computed tomography (atrophy of mostly parietal and temporal areas in Alzheimer's disease and frontotemporal ones in Pick's atrophy).

Etiology and pathogenesis. Some part in the etiology of Alzheimer's disease and Pick's atrophy is played by genetic factors. In the majority of patients with presenile dementiae, their heredity is not psychopathologically aggravated. At the same time, there are family cases of Alzheimer's disease and Pick's atrophy. For parents, brothers and sisters of such patients the risk of developing presenile dementia is higher than for the population at large. These forms of mental pathology reveal various deviations in the synthesis of proteins and their functions at the cellular level, demonstrate disruptions in interactions of the neurotransmitter systems, a reduced concentration of acetylcholine and catecholamines, as well as a higher content of some microelements in the cerebral tissues. These biochemical shifts are hypothetically connected with an atrophy of the brain which is an anatomical basis for Alzheimer's disease and Pick's atrophy.

Cerebral pathomorphological changes in Alzheimer's disease are similar to those of senile dementia. Their most significant peculiarity consists in a selective rather than diffuse character of the cerebral-atrophic process which in case of Alzheimer's disease is localized mostly in the temporal and parietal lobes. Selectivity of the cerebral atrophy is accompanied by its higher expressiveness. Like in senile dementia, a microscopic examination reveals a large number of senile plaques. It is this disease that is particularly characterized by peculiar pathologic changes in neurofibrillae (Alzheimer's degeneration of neurofibrillae). In Pick's atrophy, like in Alzheimer's disease, the atrophy of the brain is selective, but has another localization. Along with temporal lobes, the process of atrophy preferably involves frontal lobes rather than parietal ones. Microscopic changes in the brain significantly differ from the microscopic picture of Alzheimer's disease. As a rule, senile plaques and Alzheimer's neurofibrillae are not found out. An atrophy and destruction of some cortical neurons and swelling of nerve cells owing to particular intracellular formations (Pick's bodies), as well as accumulation of lipoids in the cells of cerebral parenchyma and gliocytes are revealed.

Course and prognosis. The prognosis of presenile dementiae is unfavourable due to a rapid disruption of psychic activity and death within the first few years after the onset of the disease.

Other types of dementia:

Vascular Dementia or Multi-infarct Dementia

This is the second most common type of dementia. Occurrence of multiple cerebral infarctions (caused by occlusion of cerebral vessels by arteriosclerotic plaques or thromboemboli) results in progressive deterioration of brain functions, finally resulting in dementia. There are acute exacerbations which correspond to the new infarcts, and result is step-wise deterioration of symptoms (stepladder pattern). The general symptoms of dementia are present. In addition patient has focal neurological deficits which correspond to site of infarction. There is usually history of previous stroke or transient ischemic attacks. The patients usually have hypertension and other cardiovascular risk factors. The treatment involves management of risk factors and cholinesterase inhibitors.

Binswanger's disease. It is also known as subcortical arteriosclerotic encephalopathy, and is characterized by multiple small white matter infarctions and can produce symptoms of subcortical dementia.

Lewy Body Disease (Dementia with Lewy Body)

The clinical signs and symptoms are similar to Alzheimer disease. Apart these patients also have fluctuating levels of attention and alertness, recurrent visual hallucinations and Parkinsonian features (tremors, rigidity and bradykinesia). Antipsychotic medications should be avoided as these patients are extremely sensitive to antipsychotics and can develop drug induced Parkinsonism.

Huntington's Disease, Parkinson's Disease, Wilson's Disease and Multiple Sclerosis

These predominantly motor diseases are associated with the development of dementia. The dementia seen is of subcortical type with more motor abnormalities and less of amnesia, apraxia, aphasia and agnosia.

HIV Related Dementia

The diagnosis of HIV dementia (AIDS dementia complex) is made by lab evidence of systemic HIV infection, cognitive deficits, presence of motor abnormalities or personality changes. Personality changes are characterized by apathy, emotional lability or disinhibition.

Head Trauma Related Dementia

Dementia can develop as a sequelae of *head trauma*. Dementia pugilistica (punch drunk syndrome) can develop in boxers after repeated head trauma.

Frontotemporal Dementia (FTD)

Frontotemporal dementias are a group which have similar presentation but may be caused by a variety of neuropathological substrates. **Pick's disease**⁰ is one pathological variant of FTD, and is characterized by presence of **Pick's bodies**. The frontotemporal dementia's have an **earlier onset**⁰, around 45-65 years and mainly present with behavioral symptoms and change in personality with **relative preservation of memory**⁰. Three distinctive forms of FTD have been described on the basis of clinical presentation.

- A. **Frontal variant FTD**: The symptoms are primarily of loss of frontal lobe function. The classical feature is stereotyped behavior, disinhibition and apathy.
- B. **Semantic dementia**: The symptoms are primarily of loss of temporal lobe functions and is characterized by complaints of loss of memory for words.
- C. **Progressive nonfluent aphasia**: It presents with speech dysfluency and word finding difficulties.

Treatment and prophylaxis. There are no methods of treatment capable of arresting the process of mental deficiency has been found yet. Modern pathogenetic therapy of AD provides a combination of compensatory (cholinergic or glutamatergic) and neuroprotective (neurotrophic) methods of drug exposure. It has been proven that the deficiency of the neurotransmitter acetylcholine (NA) underlies the manifestations of cognitive impairment and the subsequent formation of total dementia. In Alzheimer's disease, 30 to 95% of cholinergic neurons are lost, especially in the cortex and hippocampus. Currently, acetylcholinesterase inhibitors (AChE) are used to overcome cholinergic deficiency. In Alzheimer's disease, the number of glutamate receptors in the hippocampus area is significantly reduced - a key area for the development of Alzheimer's type of neurodegeneration, and the level of decline reliably correlates with the severity of dementia. The concept of glutamate-mediated excitotoxicity has been developed and experimental and neuropathological data have been obtained, confirming the involvement of this mechanism in the Alzheimer's type of neurodegeneration. Recently, second-generation AChE inhibitors have acquired the highest prevalence: donepezil, rivastigmine (rivastigmine) and galantamine (galantamine) and antagonists of NMDA-glutamate receptors (memantine).

Small doses of psychoactive drugs are administered in the development of psychosis, behaviour and sleep disorders.

In cases of the appearance of psychoses, neuroleptics which do not cause severe side effects and antidepressants are used. The doses of psychoactive drugs should not exceed 1/3-1/2 of average doses used for patients at a mature age. For a more expressed senile psychopathization and senile fussiness, small doses of neuroleptics are used.

Transquillizers are rarely administered owing to their unsatisfactory tolerance by people at a senile age. Sleep disorders are corrected with hypnotic drags.

Concomitant somatic diseases are treated, thereby postponing the lethal outcome. Mostly, symptomatic treatment directed at maintenance of the activity of the cardiovascular system and other vital somatic functions is given.

The patients require supervision and care. It is necessary to provide them with a diet, control regularity of their physiological discharges and cleanliness of the skin, press for a feasible motor activity and, if possible, to involve them in the simplest forms of activity. Constant control over the patients' behaviour must be exercised because they may commit dangerous acts.

Patients with senile dementia require hospitalization only if they develop some psychosis or severe disturbances in their behaviour. It should be taken into consideration that any change in the usual tenor of life, including hospitalization, may contribute to aggravation of the mental and physical state of patients with senile dementia and approach the lethal outcome.

Real measures for preventing senile dementiae are not known. Opportune effective therapy of a somatic pathology in people of the presenile age may be of some prophylactic value.

NEUROTIC DISORDERS. CLINICAL FORMS. TREATMENT AND REHABILITATION.

POSTTRAUMATIC STRESS DISORDER. TREATMENT AND REHABILITATION

Psychogenic diseases are a large and clinically varied group of diseases resulting from an effect of acute or long-term psychic traumas, which manifest themselves by both mental and somatoneurological disorders and, as a rule, are reversible.

Psychogenic diseases are caused by a psychic trauma, i.e. some events which affect significant aspects of existence of the human being and result in deep psychological feelings. These may be subjectively significant events, i.e. those which are pathogenic for the majority of people. Besides, the psyche may be traumatized by conventionally pathogenic events, which cause feelings in an individual because of his peculiar hierarchy of values.

Unfavorable psychogenic effects on the human being cause stress in him, i.e. a nonspecific reaction at the physiological, psychological and behavioural levels. **Stress** may exert some positive, mobilizing influence, but may result in disorganization of the organism activity. The stress, which exerts a negative influence and causes various disturbances and even diseases, is termed **distress**.

Classification of neurotic disorders

I. Acute reaction to stress:

1. Depressive reactions
2. Neurasthenic reactions
3. Hysterical reactions
4. Psychasthenic reactions
5. Paralysis of emotions

II. Neuroses:

1. Neurasthenia
2. Hysteria

3. Neurosis of obsessions
4. Neurotic anxious disorders
5. Neurotic depression

III. Somatoform disorders

IV. Neuroses in children:

1. Systemic (monosymptomatic) neuroses
2. Neuroses of fear
3. Pathological habitual actions

V. Reaction to severe stress and adjustment disorders

Neuroses are psychogenically caused reversible mental disorders manifesting themselves by emotional instability, higher mental exhaustibility, affection of general state of health and various somatoautonomic functions, which do not change self-consciousness of the personality and realization of the illness.

All neuroses are characterized by such common manifestations as:

- ✓ disturbances of general state of health – a feeling of inner discomfort, headache, weakness, jadedness, easy fatigability, loss of strength, bad sleep, unpleasant painful sensations in different parts of the body;
- ✓ emotional-volitional disorders – lack of emotional restraint, touchiness, disposition to affects, unsteady mood, disposition to depressive reactions, fears and obsessions, insufficient volitional control over emotional manifestations;
- ✓ disruption of other psychic functions (memory, attention, thinking, perception and consciousness);
- ✓ disturbances in the effector sphere (tics, annoying actions, functional paralyses, pareses, mutism, tremor);
- ✓ autonomic disturbances (sweating, hot flushes, lability of pulse and blood pressure, tachycardia, dyspeptic phenomena, dyspnoea).

Morbidity rate. There are no exact data about the morbidity rate of neuroses among population. Information about registered cases is available for separate regions: from 15.8 to 30.0 per 1,000 people. Neuroses make up 20-25 % of mental diseases. The number of people with neurotic disorders has significantly increased over the last decade.

Acute reaction to stress (neurotic reactions)

Neurotic reactions are acute responses to stress, the psyche being traumatized here by intimate-personal feelings. These may be a failure to satisfy some desires by the relatives, disappointment in a friend, an unfair (in the patient's opinion) remark in presence of people of his age. Such reactions are more commonly observed in adolescents. According to ICD-10, they are encoded as F43.

There are no data about the morbidity rate of neurotic reactions, because in the overwhelming majority of cases these patients do not take medical advice. The clinical forms of neurotic reactions depend upon peculiarities in the patient's personality; their development is caused by a bad psychological protection of the personality which makes it impossible to find an adequate way out of the given situation. The duration of these reactions is from a few minutes to several days. First of all, mental symptoms are reduced, while autonomic disorders last longer.

According to their clinical peculiarities, there are several forms of neurotic reactions.

Depressive reaction (F43.2) may develop 1-2 days following a psychic trauma; such a form of responding is mostly typical for a weak type of the higher nervous activity. The mood worsens, tearfulness appears, the patient's attention is focused on the psychic trauma and its consequences. Some cases develop overvalued ideas of self-condemnation and self-humiliation with resultant suicidal thoughts and even acts. Suicides may have severe consequences and necessitate resuscitation of the patients. Low spirits are accompanied by sleep disturbance, bad general state, easy fatiguability and unpleasant sensations in the heart region.

Neurasthenic reaction (F43.23) is characterized by phenomena of irritable weakness and autonomic symptoms.

Hysterical reaction (F43.25) follows psychic trauma in the artistic type of the higher nervous activity and is accompanied by wild emotions, or sometimes affective narrowed consciousness. It is not in rare cases that such patients commit suicides in order to attract attention to themselves or achieve something, and though the motives of these suicides are blackmailing, not always can the patients in the state of affect correctly assess consequences of what has been done, thereby making rather deep cuts or taking a large dose of some medicine.

Psychasthenic reaction (F43.22) appears in individuals of the thinking type and manifests itself by anxiety, indecision, inability to cope with the pettiest

problems. Any simplest act is accompanied by importunity, multiple repeated checks of the correctness of the act.

Paralysis of emotions (F43.28) develops after an effect of some psychotraumatizing factor. Understanding all the tragedy of what is going on and the danger of the given situation for their life and that of their relatives, the patients do not feel any emotions. The person becomes indifferent and apathetic; understanding and noticing everything he watches what is going on as if from aside.

Neurotic reactions do not require any special treatment. A positive effect is produced by benevolent talks with relatives and friends who sympathize with the patient and prompt a way out of the situation. Some cases require treatment with sedative vegetable drugs.

NEUROSES

Neurasthenia(F48). This neurosis is caused by a long-term effect of unfavourable factors, the most significant of them being occupational nerve stress: a large volume of the information which should be learned under the conditions of time deficit and high demands to activity.

The morbidity rate of neurasthenia is up to 5 % in the population, more than 60 % of patients take medical advice with symptoms of this neurosis.

Clinical manifestation. Irritable weakness is the main clinical manifestation of neurasthenia. The patients would complain of fatiguability, weakness, reduced capacity for work. In the morning it is difficult to “engage” into work; by the time before lunch the symptoms of asthenia slightly reduce and the capacity for work improves a bit, but very soon fatiguability develops again, when any movement requires an incredible effort. The patients become impatient and cannot stand any waiting. They easily develop affects, after which asthenia increases still more and a feeling of being guilty appears for what was said or made in the state of affect. Many patients develop hyperaesthesia to visual, auditory and even tactile stimuli; they get irritated at water dropping, daily rate sound of a time piece, touching their skin.

Their sleep is significantly disturbed. Some patients cannot fall asleep for long periods of time, others fall asleep quickly, but in both cases the sleep is superficial with frequent awakenings and absence of the feeling of rest after the sleep. At daytime the patients feel sleepiness, but even if there is an opportunity to have rest, they cannot fall asleep. Some of the patients’ constant complaints are

headaches whose variety (compression, tightening, pricking) is very unpleasant for the patients. Headaches usually become more severe after some physical and mental overstrain.

Many patients develop unpleasant sensations in different organs. For this reason they go to different medical specialists, and though the latter do not reveal any pathology it does not calm the patients. They are fixed on these sensations and think that they have fallen ill with some severe incurable disease. Hypochondriacal symptoms are quite often accompanied by other symptoms of neurasthenia.

In the course of the illness there may be hypoaesthetic (when asthenia predominates) and hyperaesthetic (when short temper predominates) forms. The outcome of neurasthenia is favourable, most of the patients recover after the treatment.

Hysterical neurosis. Dissociative (conversion) disorder (F44). The term “hysteria” was used as early as in ancient times, when the cause of hysterical manifestations was connected with sexual disturbances. This term comes from the Greek word *hysteria* which means “uterus”.

The morbidity rate. Isolated hysterical symptoms are observed almost in 1/3 of the population. General hospitals admit up to 15 % of patients with such disorders. Females fall ill twice oftener than males.

The clinical picture of hysterical neurosis is notable for a variety of its symptoms: mental, neurological, somatic. People with hysterical neurosis are characterized by easy suggestibility, strong and labile emotions. Hysterical disorders are peculiar for their demonstrative character, particular changeability, abrupt appearance and disappearance. Symptoms of the illness rather frequently assume the character of manipulations with the surrounding people, and after resolution of the psychotraumatizing situation they weaken or disappear at all. These disorders are allegedly protective.

In hysterical neurosis, somatic and neurological symptoms may be often connected with the contents of the psychic trauma. Thus, out of the fear to fall ill with some disease patients may develop its “symptoms”. In this connection hysteria is called a great imitator, a chameleon.

Hysterical neurosis usually develops in sensitive and ingenuous people of the artistic type with signs of psychic infantilism and emotional immaturity. The clinical picture of hysterical neurosis has the following groups of symptoms: affective, autonomic, motor, sensory.

Affective disorders manifest themselves through excessive lability of emotions, extremely unsteady mood, wild emotional reactions. The patients may loudly sob, making an impression of inconsolable grief, and merrily laugh a few minutes later.

Autonomic disorders are expressed through numerous “somatic” symptoms: pains in the heart, palpitation, faints, nausea, vomiting, abdominal pains, dyspnoea, “attacks” of asphyxia, false pregnancy, etc.

Motor disturbances in hysteria may be in the form of hyperkineses or akineses. Hyperkineses manifest themselves by tics, tremor of the head and extremities, blepharospasm, glossolabial spasm, chorea-like movements, a fit of convulsions. The hysterical fit of convulsions should be differentiated from the epileptic one.

Epileptic paroxysms	Hysterical fits
Their appearance is not caused by any external factors	They appear in a psychotraumatizing situation
The duration of the fit is limited in time	Their duration depends upon the duration of a psychotraumatizing situation
Disengagement or change of consciousness is observed	Consciousness is clear or affectively narrowed
The postictal period is most often characterized by the development of coma which turns into sleep	After the fit, some elements of ostentatiousness and hysterical mutism are observed
The rate of paroxysms during the illness increases	The rate of paroxysms depends upon psychotraumatizing factors
Convulsive seizures are often observed	Convulsive seizures are seldom observed, only after a psychic trauma
Epileptic changes of the personality are formed in the patients	The patients have personality peculiarities by the neurotic type
Sometimes elements of hysteriform manifestations are possible	Hysterical symptoms are leading ones in the clinical picture
There are typical changes on EEG	EEG is within the physiological norm limits

Control of paroxysmal states is achieved with help of antiepileptic drugs	Control of paroxysmal states is achieved with help of psychotherapy and tranquillizers
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Hysterical hyperkineses, unlike organic ones, depend upon the patients' emotional state and are accompanied by unusual postures and autonomic symptoms (a lump in the throat); they disappear or become weaker after elimination or desactualization of psychotraumatizing effects.

Hysterical akinesiae develop by the type of mono-, hemi- and paraplegiae. They are characterized by disturbances in the gait: "astasia-abasia", when the patients are not able to stand and go without any organic disorders. Some patients complain of weakness in their arms and legs, which appears in cases of excitement, when the legs become "wadded", "heavy" and these people "stumble at every step".

Typical for hysterical motor disorders is lack of correspondence between them and the topographic location of nerve trunks or localization of a focus in the CNS, absence of pathological reflexes, changes in tendon ones.

Aphoniae are seldom observed in recent time, more often the patients complain of stammering, difficulties in pronouncing some words.

Sensory disorders are represented by a disturbance of sensitivity and painful sensations in different organs and parts of the body. Disturbances of skin sensitivity have various configuration and location, more frequently they are localized in the region of the extremities in the form of gloves, stockings, socks.

It should be noticed that owing to a wide popularization of medical knowledge, some pathomorphism of hysterical manifestations has taken place. Thus, instead of an absolute loss of sensitivity the patients complain of dumbness in their extremities, a sensation of creeping, hot flushes to the extremities. In case of hysterical neurosis the patients would talk about their feelings with some inspiration, emphasize their exceptional character: the pains are "terrible", "intolerable" and cannot be compared to anything. At the same time, they do not feel these disturbances as a burden, as if being indifferent to them.

The foreign literature terms some hysterical disorders dissociative. Dissociation is such a state when for a certain period of time some mental complexes get autonomy and control mental processes breaking any contact with the psychic life integrity. These are transitory disruptions in the integration of

psychic functions. Hysterical disorders of the dissociative type include amnesiae (F44.0), fugue (F44.1), stupor (F44.2), trances and obsessional states (F44.3), and hysterical psychoses which will be described in chapter “Situational psychoses”.

Clinically, the term “conversion” (from Latin conversion, i.e. “transformation”, “substitution”) means a particular pathological mechanism which causes transformation of psychological conflicts into somatoneurological symptoms. These are motor, sensory and autonomic symptoms of hysterical neurosis.

Hysterical psychogenic reactions may be short-term and disappear without any treatment. But a prolonged (during several years) fixation of morbid symptoms is also possible. In some cases there is a wavy course: after attenuation of hysterical disorders a tendency to their appearance in psychologically unfavourable situations remains. In a protracted course of hysterical disorders, the symptoms of conversion are fixed, characterological changes are aggravated and there is addition of steady asthenia, hypochondriacal and dysthymiac disorders. Underestimation of the clinical importance of hysteria symptoms interpreted as a result of autosuggestion or aggravation and simulation may cause improper diagnosis and administration of inadequate therapy.

Unlike conversion hysterical symptoms, in cases of malingering the disease-imitating signs are under the conscious control and can be discontinued by the malingerer at any moment. In hysteria, the somatoneurological disorders develop according to their own clinical regulations irrespective of the patient’s wishes.

Obsessive-compulsive neurosis– is a common term for neuroses which manifest themselves through morbid fears (phobia), annoying thoughts (obsessions), annoying actions, anxiety, recollections.

Different manifestations of obsessive-compulsive neurosis are encoded in ICD-10 with different signs: phobic and anxious disorders – F40, agoraphobia – F40.0 (without panic disorders – F40.00, with panic disorders – F40.01), social phobia – F40.1, specific (isolated) phobia – F40.2, other anxious disorders – F41, obsessive-compulsive disorders – F42.

In the Ukrainian psychiatry these states are traditionally described as a separate form of neurosis because they are joined by one common etiological factor (psychic trauma), develop in people with similar personality peculiarities, symptoms of the illness seldom occur in an isolated form and are accompanied by autonomic disturbances typical for all the neuroses. Separate manifestations of this neurosis are rather common for the patients treated by general practitioners. Thus,

the morbidity rate of obsessive-compulsive disorders is up to 10-20 % in the general medical network, they occur in 1.5-2 % of cases in the population, while in the practice of psychiatrists they make up to 1 % of all the patients.

Manifestation of the symptoms of obsessive-compulsive neurosis is preceded by a psychic trauma which determines the contents of the leading disorder. Thus, a female patient who leaving the underground found herself in a crowd of people, felt unpleasant sensations in her heart and the fear that it might stop, and later she developed agoraphobia.

The initial stage of the illness is most commonly characterized by a panic disorder which determines the debut of the disease. It may be represented by abruptly appearing and rapidly increasing autonomic disturbances (sensations of asphyxia, difficulty in breathing, dizziness, palpitation, sweating) accompanied by the fear of losing consciousness, madness, death. This state may last up to 20-30 minutes. Panic attacks are followed by some annoying fear (phobia), the most frequent of them being agoraphobiae, social phobiae, hypochondriacal phobiae.

Agoraphobia (F 40.0) is the fear of open spaces, transport and crowd. This disorder is provoked by an underground journey, being aboard an airplane, in a shop, crowd, lift, going to the theatre, cinema, etc. The fear is accompanied by autonomic symptoms (dryness in the mouth, tachycardia, profuse sweating, tremor), thoracoabdominal symptoms (dyspnoea, asphyxia, chest pains, nausea, discomfort in the gastrointestinal tract), mental symptoms (derealization, depersonalization, fear to lose self-control). The patients try to avoid any situations when they may find themselves without being accompanied by a relative in places where it is difficult for them to go out unaided. Some patients would not leave their home being afraid of attacks of the fear; it affects their life stereotype and social adaptation, sometimes they refuse any activity outside their home.

Social phobia(F40.1) are the fear to find oneself in the centre of attention, the appearance of confusion and shame in presence of other people. Social phobiae usually manifest themselves in adolescents and young people; they are provoked by particular situations in school, such as answering at the blackboard, an examination, a necessity to appear on the stage, as well as to contact with teachers, masters and representatives of the opposite sex. At the same time, an intercourse with the relatives and friends does not produce any fear. The patients are afraid of the situations when they have to make some action in the presence of strangers and its negative appraisal is supposed. They try to avoid evening parties, are afraid to eat, write, use public conveniences in the presence of strangers. The patients are afraid that their associates will notice this fear and mock at them. The patients'

attitude to the fear is always critical, but they cannot get rid of it and as a result their self-estimation is understated. Social phobias are often accompanied by other mental disorders: anxiety, other phobias, affective pathology, alcoholism, disturbances in food behaviour.

There are two main groups of social phobias: isolated and generalized. Isolated social phobias are the fear not to make some habitual actions in public and avoidance of concrete situations. No difficulties in personal contacts outside these situations appear. One of the forms of an isolated social phobia is the fear to blush, to demonstrate awkwardness, confusion in personal contacts (erythrophobia). Being afraid that their associates will notice it, the patients are shy in public and often embarrassed. In generalized social phobias, the fear is accompanied by appearance of ideas of littleness and reference. Most frequently, these disorders develop in the syndrome of scopophobia (the dread to look absurd, to display one's own defect in public). The patients feel shame which is not caused by any real facts but affects their behaviour (avoidance of contacts with people).

Hypochondriacal phobias (nosophobia) are the morbid fear of some bad disease. Cardio-, cancro-, syphilo-, AIDS- and insult phobias are the most common. These patients often visit different doctors demanding medical examination. The patients' efforts are aimed at elimination of the conditions which cause appearance of the fear and panic attacks. They independently work out a complex of protective and adaptive measures: they move to an ecologically clean region, change their job. Certain hypochondriacal lines are formed: limited contacts, a sparing way of life, non-participation in some activities.

Specific (isolated) phobias (F 40.2) are limited by a strict definite situation: being near some animal, fears of height, thunderstorm, nausea, dental manipulations. Any contact with an object of the fear causes anxiety, therefore typical for these patients is to avoid phobic situations or objects.

Besides morbid fears, obsessive-compulsive neurosis is characterized by obsessions (annoying thoughts) and impulses (annoying actions).

Annoying thoughts appear in spite of the patient, are perceived by him as alien and absurd, he tries to resist them. Obsessions are more common in the form of doubts, contrast drives, the morbid fear of becoming dirty. In annoying doubts, the patients are haunted by thoughts about correctness of their decisions and actions. Such patients would constantly try to remember if they have locked a door, turned off gas, electricity and water supplies. These doubts haunt the patient when he fulfills his job duties: whether he has correctly arranged some papers, carried

out his chief's order, put down a telephone number, etc. This diffidence makes them waste much time for repeated checks. Morbid sluggishness is a bad obstacle in any everyday activity, requiring hours for the simplest acts: dressing, meals, shaving. Commonly observed are morbid counting, repetitions, pedantry, an increased carefulness, development of different rituals in counting, "good" and "bad" numbers. Some concrete contrast drives are extremely unpleasant, when the patients develop an irresistible desire to make some act or pronounce a phrase which contradicts to their own directions and generally accepted ethics. For instance, to say obscene words, injure one's own relatives and children. These thoughts cause the fear to lose self-control and, possibly, make some actions dangerous for others and the patient himself. The patients would ask their relatives to hide knives, forks, axes. Annoying thoughts are accompanied by the feeling of estrangement and bright affective satiation, which are alien to the contents of the thoughts and combined with annoying drives and actions. Rather often the patients reveal annoying thoughts and fear of becoming dirty (mysophobia). They are afraid to make themselves dirty with dust, urine, soil, faeces, as well as fear penetration of toxic substances or invasion of microorganisms into their body. In order to avoid it, the patients would carefully follow rules of personal hygiene: they often wash their hands, change clothes, every day do their flat, carefully treat foodstuffs. The patients would resort to various ways of protection, some of them seldom leave the flat, do not receive even their relatives being afraid of any contact with dirt or toxic substances. Morbid doubts are accompanied by frequent checks of their own actions.

Morbid actions almost never occur in an isolated state. Sometimes they are in the form of isolated monosymptomatic motor disturbances, oftener tics. The patients would shake their head, move their arms, blink.

Depending upon structural peculiarities of the obsessive syndrome, the following categories are isolated: F42.0 – annoying thoughts, mental chewing; F42.1 – mostly compulsive actions, obsessive rituals; F42.2– mixed annoying thoughts and actions. В МКБ-10 выделяются в отдельную группу «другие тревожные расстройства» F41.

The course of obsessive-compulsive neurosis is chronic. Recovery is rare. The cases of monomorphic manifestations may be characterized by long-term stabilization, with a gradual reduction of psychopathological symptoms and social adaptation. The most resistant to therapy are phobiae of becoming dirty or infected, sharp objects, contrast obsessions, numerous rituals. Such patients often have

relapses of morbid manifestations and are at the risk of formation of residual disorders.

ICD-10 isolates “other anxious disorders”, F41, as a separate group.

Panic disorder (episodic paroxysmal anxiety, F41.0). The attacks of panic pass like in agoraphobia. The patients rapidly develop the fear of expectation of repeated attacks which they try to conceal. These attacks often appear spontaneously without any connection with the situations endangering or threatening the patients’ life. The anxiety develops abruptly, achieves its maximum within a few minutes and is accompanied by autonomic disturbances. If there are 4 attacks a month, this is a moderate panic disorder (F41.00); if there are up to 4 attacks a week, this is a severe panic disorder (F41.01).

Generalized anxious disorder (F41.1) is often accompanied by other neurotic states. It is observed in 2-5 % of the population, twice more frequently in females than in males. Clinically, the disorder manifests itself by some steady anxiety, often having no contents, and is accompanied by the feeling of internal tension and autonomic symptoms whose intensity is less than in the panic disorder. The patients feel some internal trembling, they are timid and foresee the worst outcome in all affairs. Such persons are impatient, short-tempered and fussy. Usually they do not regard their morbid symptoms as psychic, therefore seldom visit psychiatrists, most of them seek help of internists.

Mixed anxious and depressive disorder (F41.2) is the state where expression of the depressive and anxious components is not sufficient and none of them predominates over the other one. These disorders are accompanied by autonomic disturbances and develop in psychogenic situations.

Neurotic depressions. Neurotic depression was first described as a separate nosological form in the beginning of the 20th century. In ICD-10 these disorders are classified as a prolonged depressive reaction manifesting itself with mild neurotic depressive disturbances caused by some protracted stress situation (F43.21).

Neurotic depression develops more frequently in people with rigidity and not inclined to compromises, who try not to manifest their emotions outwardly, but suffer their troubles “inside”. This neurosis is usually caused by a long-lasting, unsolved unpleasant situation, e.g. a disease of the child, living apart from the relatives, absence of any ability to share one’s own feelings with other people. The patients would try to suppress negative emotions in themselves and not to demonstrate them to their associates.

The onset of the illness is characterized by appearance of autonomic-dystonic symptoms (sleep disturbances, headache, pains in the heart region), a few weeks later followed by asthenia with blues and anxiousness. The patients say that they have lost the joy of life, but at the same time they do not assess their future as hopeless, they make plans for future as if not taking into account their unsolved psychoraumatizing situation. It is not in rare cases that the patients try to alleviate their sole pain with a higher activity when fulfilling their professional and home duties, despite weakness and fatiguability. Some patients become tearful on any occasion. A long course of depressive neurosis develops garrulity, which was not peculiar to such patients before, and they begin to “unburden their heart” even to people whom they hardly know, telling them about their feelings and troubles.

One of the peculiarities of this neurosis is the fact that psychotraumatizing situations usually do not affect the patients’ feelings; as a rule, they do not attribute their state to it. Like in other neuroses, the clinical picture of neurotic depression is characterized by a significant expressiveness of somatoautonomic disturbances: fluctuations in blood pressure, dysfunctions of the gastrointestinal tract, sleep disturbances in the form of difficult falling asleep and wakening during early morning hours with a feeling of anxiety, palpitation. The patients often visit therapists, who either treat them symptomatically or diagnose some somatic disease. It should be noticed that despite a lot of somatic complaints in the patients, there is no hypochondriacal fixation on them. Neurotic depressions have a wavy course and often are a stage in the neurotic development of the personality.

Somatoform disorders. Among clinical manifestations in patients with neuroses, who take advice of internists, somatized symptoms prevail. The opportune diagnosis of mental disorders with “somatic” masks is of great importance because some 20 % of all the health protection means in the general somatic practice are spent for treating cases of somatoform disorders. But only 19 % of the needy patients are referred to consult a psychiatrist or psychotherapist, an average delay with such a referral being about 8-9 years.

Cases of somatoform disorders make up to 25 % in the whole number of patients of the general somatic practice in all the countries, but there are no exact data about the morbidity rate in the population. The somatized disorder is markedly more common for females, whose morbidity is 1-2 %. The hypochondriacal disorder among patients of the general somatic practice makes up from 3 to 14 %, no sex-specific differences and family cases being observed. The chronic somatoform painful disorder is also more common for females versus males with the ratio of 2:1.

Etiology and pathogenesis. The heading of the “somatoform disorder” actually includes neurotic somatized borderline mental disorders whose etiology and pathogenesis have been analysed from the viewpoint of the Ukrainian psychiatry. Thus, a leading part in the etiopathogenesis of somatoform disorders, like in neuroses, is played by psychogenic factors (intrapersonal and microsocial conflicts), but patients with somatoform disorders, as a rule, are reluctant to discuss their psychological problems. Side by side with this fact such patients are supposed to have some neuropsychological basis, genetic predisposition. According to some authors, “somatization” of mental disorders is facilitated by alexithymia (a person’s inability to express his emotional feelings, difficulties in the verbal and symbolic expression of emotions). Features of alexithymia are also typical for patients suffering from “classical” psychosomatic diseases. Alexithymia is characterized by present difficulties in the recognition and description of one’s own feelings, a reduced capacity for symbolizing and dreaming, more concentration on outward events than innermost feelings.

Classification of clinical manifestations. Mental diseases mostly manifesting themselves by various “pseudosomatic” disorders were traditionally described in the Ukrainian psychiatry within the frameworks of neurasthenia, hysteria and hypochondria, somatoautonomic symptoms being undoubtedly considered as one of the compulsory signs of any neurotic disorders.

Recently, the structure of nonpsychotic mental diseases has been characterized by a sharp rise in the share of disorders with prevalence of somatic complaints, mostly with a somatic expression of mental disorders. Introduction of the diagnostic category of “somatoform disorders” in ICD-10 corresponds to these tendencies.

Somatoform disorders in ICD-10 are described as a group of psychopathological disturbances whose main sign consists in the relapsing development of physical symptoms along with constant demands for medical examinations in spite of confirmed negative results and doctors’ assertions about absence of any physical basis for the symptoms.

Somatoform disorders include the following subgroups:

- ✓ somatized disorder – F45.0;
- ✓ undifferentiated somatoform disorder – F45.1;
- ✓ hypochondriacal disorder – F45.2;
- ✓ somatoform autonomic dysfunction – F45.3;
- ✓ chronic somatoform painful disorder – F45.4.

Somatized disorder. Its clinical picture consists of numerous stable and modifying somatic symptoms, which subjectively exist at least two years, but with absence of any somatic diseases which could explain these symptoms. The symptoms may relate to any part of the body or system, most often they are gastrointestinal (pain, nausea, belching, vomiting, diarrhoea, regurgitation, meteorism), cutaneous (itching, burning, tenderness, numbness, pricking), cardiovascular (pains, dyspnoea), urogenital (dysuria, pains in the genital organs, discharges). The patients' attention is always fixed on these symptoms and they would take medical advice. A frequent comorbidity with anxiety, depression and abuse of psychoactive drugs is observed.

Hypochondriacal disorder. This manifests itself by fixed ideas (not delusions) about presence of one or several more severe somatic diseases, therewith normal routine sensations being interpreted as abnormal and morbid. The patients would constantly make somatic complaints, their attention being usually focused on the pain in either one or two organs or systems of the body. The patient may name a supposed somatic disease, this opinion may change from one disease to another. As a rule, the above ideas are preserved despite the fact that no somatic explanation adequate to the present complaints has been revealed. Unlike cases of the somatized disorder, for these patients the disease itself and its consequences are more important than separate symptoms, and they take medical advice mostly with the purpose of diagnosis.

Somatoform autonomic dysfunction. The patient's complaints are constantly related to one of the systems which is controlled by autonomic regulation (cardiovascular, respiratory or digestive). The symptoms do not point out any physical disturbance of the organ or system involved, but they either reflect objective signs of autonomic excitement (palpitation, dyspnoea, hiccough, etc.) or are subjective and nonspecific (transient pains, burning, heaviness, bursting open, etc.). Depending upon the organ and system, which are regarded by the patient as the source of his symptoms, the following separate disorders in this group are isolated and correspondingly encoded with the fifth sign:

- ✓ the heart and cardiovascular system (F45.30): cardiac neurosis, Da Costa's syndrome, neurocirculatory dystonia;
- ✓ the upper portion of the gastrointestinal tract (F45.31): gastric neurosis, psychogenic aerophobia, hiccough, dyspepsia, pylorospasm;
- ✓ the lower portion of the gastrointestinal tract (F45.32): psychogenic meteorism, irritable intestine syndrome, gas diarrhoea syndrome;
- ✓ the respiratory system (F45.33): psychogenic forms of cough and

dyspnoea;

✓ the urogenital system (F45.34): psychogenic dysuria, a higher urinary frequency.

Chronic somatoform painful disorder. The patients complain of a constant severe pain which cannot be completely explained by some physiological process or somatic disorder. It develops against a background of a psychoemotional conflict, and there is a significant secondary advantage of the symptom: greater care and support from the part of the patient's relatives and doctors. Pains of the psychogenic origin in other mental disorders (e.g., in depression) and those which develop according to known pathophysiological mechanisms (a pain of muscle tension, migraine) are excluded. The onset of the somatoform disorder is oftener observed at a young age. The chronic somatoform painful disorder more frequently begins at the age over 45. The course of somatoform disorders is, as a rule, chronic and fluctuating.

The treatment is started only after an absolute exclusion of an organic cause of the suffering. All the stages of treating the somatoform disorder require a thorough dynamic control of the somatic state, because a probability of developing somatic diseases in patients with somatoform disorders is the same as in the population. About 2/3 of the cases with somatoform disorders can be given treatment in the general somatic network (as outpatients of a local polyclinic or inpatients of multi-type hospitals). Psychoactive drugs in these cases are administered by a general practitioner with a consultative participation of a psychiatrist. As a rule, each third case with somatoform disorders requires specialized psychiatric aid (a psychotherapist's room, a psychoneurological dispensary, a hospital for neuroses, a sanatory department of a mental hospital). The programme of treatment should be individual with an optimum combination of psychopharmacotherapy, psychotherapy and social support. The therapy of somatoform disorders always uses psychoactive drugs of different types (tranquillizers, antidepressants, neuroleptics, carbamazepine), as well as somatotropic drug preparations (B adrenoblockers, calcium channel blockers, hypotensive drugs). Tranquillizers are widely employed both for monotherapy and in combination with other psychoactive means (short-term courses due to a risk of developing dependency). For the therapy of chronic pain syndromes, antidepressants are indicated, as they produce both the antidepressive and primary analgetic effects. Serotonergic drugs are preferable owing to their more favourable type of side effects (Citalopram, Sertraline, Paroxetine, Lerivon).

Psychotherapy is always indicated for patients with all clinical forms of somatoform disorders. Depending upon the peculiarities in the patient's

personality, acuteness of the symptoms and presence of the actual psychotraumatizing situation, the forms and methods of psychotherapy are chosen: hypnosuggestive, psychodynamic, family, cognitive or behaviour.

Neuroses in children.

Systemic (monosymptomatic) neuroses are usually observed in children and are caused by functional weakness of some somatoautonomic system as a result of its immaturity or affection. They appear by the mechanism of conditioned reflexes. Neuroses in children are a disease of the forming personality which involves its significant aspects, the system of its relations. More commonly, their onset is not acute but during some more or less prolonged period of time. Such systemic neuroses include: stammering, enuresis, tics, regurgitations in infants, anorexia, encopresis, neurotic habitual vomiting, neurotic cough. One of the peculiarities of childhood neuroses is the fact that they are seldom triggered by an acute psychic trauma. More common are long-term unfavourable external effects, which not always are regarded by adults as negative. For instance, if the child is cared by other people rather than by his mother. Little children cannot rationally assess the situation, but emotionally respond to it. In the young children's age there may be a disturbance of nutrition (F98.2), expressed by anorexia or periodic belching of food followed by its chewing and swallowing. Such disturbances are common for the period of the child's passing on to independent eating, when the meal is eaten in a sitting position (new for the child), with help of unknown covers (plates, spoons, cups). If then the mother (or anybody else, who feeds the child) displays impatience, punishes the child, the latter develops a negative conditioned reflex to the process of feeding. Besides, refusal to eat may be caused by a food burn, forced feeding. Children refuse either any food, or selectively. The child's feeding is accompanied by capriciousness, depression, tearfulness, sometimes vomiting.

Features ages crises manifested in the clinical picture of the children's neuroses.

In early childhood dominated by autonomic symptoms (fearfulness, tearfulness, sleep disturbances, gastrointestinal disfunction, the children are afraid of new toys, new people, etc.). The first ages crises (2 - 4 years old) characterised by disturbance of behavior in the form of passive protest reactions (enuresis, faecal incontinence, constipation, mutism) or active (aggression, anger). By the 2nd ages crises (6 - 8 years) neurotic manifestations are getting more variable, in this age systemic neuroses manifest such as enuresis, stuttering, tics, fear of attending school, disobedience, inclination to fight.

In pubertal age reactions of protest are expressed in the leave the home, school without permission of. In pubertal age symptoms of autonomic dysfunction are less dominated. Hypochondriacal condition, dysmorphophobia, anorexia nervosa and bulimia, various forms of imitation behavior (imitation of adults) are developed in most of cases.

Young children sometimes develop neurotic habitual vomiting; it is usually connected with anorexia and refusal to swallow any thick and solid food. This is a psychogenic reaction to some unpleasant feeling in the process of eating.

Eating of inedible stuffs (pica) in childhood (F.98) develops at the age of 1-6 years, often in children with a severe degree of oligophrenia. Mothers of such children do not care for them, they are emotionally cold and immature. More frequently, the children would eat pieces of plaster, rags, hair, stones, paper, sand, clay, plants with possible severe complications (intoxications, helminthic invasion, ileus).

Neurotic enuresis (F98.0) appears after an acute or protracted psychic trauma in 7 % of boys and 3 % of girls at the age of 4-5 years. Enuresis is more common at night, accompanied by sleep disturbances, emotional lability and tearfulness, and depends upon the conditions in which the child is. In a long-term course of neurosis the child's suffering of his defect is morbid, he develops fear and anxious expectation of the night with a resultant difficulty in falling asleep and interrupted sleep.

Neurotic encopresis is a voluntary or involuntary secretion of faeces with a psychogenic cause (such as a long-term conflict situation in the family, extremely strict upbringing, appearance of the second child in the family). The children do not experience any disposition to defecation, and learn about secretion of faeces by smell or revealing it on their linen. They suffer morbidly, are ashamed of their parents and other children, hide the spoiled linen from the parents, become tearful, short-tempered, and feel depression.

Neurotic tics (F95) are more frequently observed in children of the school age (7-11 years). They manifest themselves with sudden, quick and repeated stereotyped movements: winking, twitches of the shoulder or head, movements of the facial muscles, tongue, neck and mandible, coughing or (more seldom) movements of the extremities and trunk. At first, tics develop in stress situation, and later may be fixed.

Neurotic stammering (F98.5) is a disturbance of the rhythm, tempo and fluency of the speech caused by a convulsive excitability of the speech apparatus

muscles. It is accompanied by disorders in speech respiration and communicative function of the speech. Its rate is 1.5-5 %, most frequently it develops at the age of 2-4 years. Stammering in young children results from either some fright or parting with their parents. The disorder develops gradually, and episodes of stammering alternate with periods of normal speech. In the elementary school forms, stammering becomes constant. It does not manifest itself in some children when they sing, recite, address animals or inanimate objects. It is not in rare cases that in the process of talking such children make auxiliary movements in the muscles of their face, neck, extremities (so-called speech “tricks”). In adolescents, stammering usually increases during talks with strangers, a speech before the class, a telephone conversation. The outcome is favourable with a spontaneous recovery in up to 80 % of cases. An unfavourable course results in the formation of logoneurosis.

Elective mutism (F94.0) is the rarest disturbance of childhood, girls prevailing among the patients. It develops after either acute or (more frequently) chronic psychic traumas. The parents of these children are notable for various personality peculiarities and often express their discontent with silence. Such children would not talk at school or in street, but use speech at home in contacts with their relatives. The disorder appears more often in the beginning of education, at school, and is accompanied by a higher shyness, timidity before strangers. Sometimes mutism manifests itself only at some lessons, often after tactless remarks of the teacher concerning the child accompanied by laughter of the whole class. The disorder lasts a few months, sometimes it can be fixed and persist for several years.

Pathologically habitual movements (F98.8). These are habitual fixed movements in younger children: sucking of the fingers and tongue (cheilomania), biting of nails (onychophagia). The most typical for younger pupils and increasing in excitement are such things as a drive to pull out hairs on the head, eyebrows and eyelashes (trichotillomania), rhythmical voluntary swings with the head and body, observed in little children before falling asleep (jactation). Pathologically habitual actions are observed in cases of mental stress in anxious and excitable children as conditional reflex devices to relieve their anxiety.

Anxiety neurosis. Patients develop overvalued dreads, whose contents depend on the child’s age and a concrete psychotraumatizing situation. In children at the age of 3-6 years, these are dreads of animals, characters of fairy tales and films, darkness, various images used by adults for frightening (witches, ogres and “scarecrows” from folk tales, etc.). Younger pupils develop some dread of the school, when the teacher unfairly scolded or punished the child. Such children

would leave school, walk in streets. They would complain of fatigue, headaches and nausea. Being afraid of punishment, some children run away from their home and are on the tramp. At the age of 6-8 years there may be dreads of darkness, loneliness, separation from relatives. Dreads in adolescents are connected with apprehension for their own life, a possibility of death.

Peculiarities of classical neuroses in children

Depressive neurosis at the preschool age manifests itself by autonomic disturbances, anxiety, fear, disturbances of behaviour, sleep and appetite, loss of body weight. Separation from parents and loss of parents are the psychotraumatizing factors of this age. At the young and middle school age, a psychotraumatizing effect is produced by poor progress in studies which is superfluously condemned by the parents. Such children develop listlessness, fatigue, shortness of temper, and melancholia at an older age. The duration of depressive neurosis in children is short, some cases have a neurotic development of the personality.

Neurasthenia (asthenic neurosis) of childhood is characterized by weakness, shortness of temper, autonomic and motor disturbances (restlessness, motor disinhibition, inability to preserve the same position for a long period of time). In some cases autonomic disturbances (nausea, vomiting, anorexia, sweating, hot flushes, lability of pulse and blood pressure, tachycardia, dyspeptic phenomena, dyspnoea) are dominated in clinical picture of neurasthenia in children.

Hysterical neurosis in children manifests itself by sensomotor and autonomic disturbances: retention of urine and speech, sleep disturbances, palpitation, faints, dizziness, dyspnoea. Disturbances of sensations are not common, sometimes the child is unable to stand and walk, but can move legs in the recumbent position. Prohibitions or punishments at the young age result in attacks with motor excitement: the children would fall down on the floor, cry, jerk their legs.

Obsessive-compulsive neurosis of childhood usually develops in two variants: phobic and obsessive. The latter is characterized by various annoying actions: tics, twitchings with their critical assessment. Pupils develop motor rituals as a protective reaction in dreads and apprehensions, e.g. multiple washing of their hands in the dread of catching some infection. Sometimes the rituals are of a forced character. In order to prevent an anticipated danger the patient commits various acts. The phobic variant of neurosis in pupils manifests itself by the dread of spoiling, sharp objects, anxiety for the parents' health. Older children develop the

dread of falling ill with some disease: cancerophobia, cardiophobia, etc. Obsessive-compulsive neurosis arise gradually more often in spleeny, restless children after some time after psychic trauma.

Prognosis. The course of neuroses, which are functional psychogenic diseases, is usually favourable. The effect of the therapy of neurotic disorders is high, it is possible to achieve a significant improvement and actual recovery in 60-80 % of the cases. In anxious-phobic disorders, some half of the patients reveal relapses of the illness within the first three years following the treatment. A more favourable outcome is often observed in patients at the age of 30-40 years, as well as in females and married patients. Some cases demonstrate the neurotic development of the personality. An insufficient level of the personality maturation, some somatic burden, a long-term unsolved psychotraumatizing situation and accentuation of the character are risk factors in this case. Appearance of polymorphism of neurotic disorders significantly hampers therapy and rehabilitation of the patients. This polymorphism in an abnormal personality is explained by its response to the state of one's own health and insolvency rather than only to the psychic trauma and its consequences.

The treatment of patients with neurotic disorders.The treatment of patients with neurotic disorders should be combined: psychotherapy, general health improving therapy, use of psychoactive drugs, physiotherapy, remedial gymnastics. The part of each method in the therapy of different manifestations will be unequal, but in order to achieve success and prevent a protracted course it is necessary to use all the components. The overwhelming majority of the cases are treated as outpatients at psychoneurological dispensaries, rooms for neuroses, psychotherapeutic and psychohygienic rooms of polyclinics in the general medical network. Outpatient aid turns out to be effective in mild neurotic disorders: subclinical panic attacks, monosymptomatic obsessions, transitory hysterical, asthenautonomic, agryptic disturbances. But some cases, i.e. patients with acute anxious phobiae (manifestative panic attacks, generalized anxiety, panphobiae, hysterophobic and dissociative states) require inpatient treatment which is given at specialized departments for patients with neuroses.

The psychogenic character of the abnormality necessitates psychotherapy for all the patients with neurotic disorders which are differentially applied depending upon the symptoms and directions of the patient. Both group and individual methods of psychotherapy are used. If the clinical picture is characterized by prevalence of phobic disorders, the effect will be achieved by supportive therapy directed at improving the psychological state of the patient. In order to remove

phobias, the patient is taught to resist the fear-arousing object, using behaviour psychotherapy, different kinds of relaxation, including hypnotherapy.

Psychopharmacotherapy is conducted with regard for the character of morbid symptoms, and though drug preparations of many psychopharmacological classes (tranquillizers, antidepressants, neuroleptics, nootropics) are used for treating neurotic disorders, the most frequent of them are tranquillizers.

The therapy of obsessive-compulsive disorders is first of all conducted with serotonergic antidepressants, the first place among them belonging to tricyclic derivatives (Anafranil); together with them selective inhibitors of serotonin uptake are widely used: fluoxetine (Prozac), sertraline (Zoloft), fluvoxamine (Fevarin). The latter is the most effective for panic attacks, Zoloft for contrast obsessions, and Aurorix (selective inhibitor of MAO uptake) for social phobias.

Tranquillizers, especially benzodiazepine derivatives, produce their effect against anxiety and obsession; have a wide spectrum of anxiolytic activity and low death rate in overdoses.

Benzodiazepines are used for anxious-phobic, obsessive-compulsive (acute and long-term) states in combination with somatoautonomic disturbances. Panic attacks are controlled with alprazolam (Xanax) and clonazepam (Rivotril), as well as intravenous drop-by-drop administration of diazepam (Valeum, Seduxen, Sibazon), chlordiazepine (Librium, Hellenium). Taking into account a possibility of developing signs of dependence, benzodiazepine derivatives are administered in the form of short-term courses.

Neuroleptics are seldom used for treating neurotic states. In episodic short-term hysterical reactions it is recommended to prescribe short courses of tranquillizers at small doses. Prolonged hysterophobic states are controlled by a combination of tranquillizers with neuroleptics (Neuleptil, eglonil, chlorprothixene). In the outpatient treatment of neurasthenia it is necessary to administer so-called "daytime" tranquillizers whose sedative and myorelaxing effects are insignificantly expressed: meprobamate, Atarax, Grandaxine, rhudotel, hydazepam. If the clinical picture of neurasthenia is characterized by prevalence of asthenic symptoms, tranquillizers are to be combined with nootropics (Noophen, piracetam, aminalon) and stimulants (sidnocarb, meridin) at small doses.

Persistent sleep disturbances require administration of drugs with a hypnotic effect. These are benzodiazepine derivatives (triazolam – chalcion, Midazolam – Dormicum, flunitrazepam – Rohipnol, flurazepam – dalmadorm), cyclopyrrone

derivatives (zopiclon – Imovane), imidazopyridine derivatives (zolpidem – Stilnox, ivadal).

Antidepressants are the most effective for neurotic depression.

Medical psychiatric examination of patients with psychogenic disorders

The medical labour examination. In the acute period of neurosis when active therapy need, patients are recognized as temporarily incapable with release from work for the period up to 4 weeks. The protracted obsessive-hypochondriacal condition sometimes lead to temporary disability of patients. Disability should not be determined in patients with hysterical conversion syndrome, since it can lead to the formation of patient's utilitarian installations to hindering recovery from disability.

Forensic psychiatric medical examination. Patients with neurotic disorders are considered legally responsible and declared sane. They have capacity of correctly control one's own actions and be aware of them.

Medical military psychiatric examination. Patients with severe neurotic disorders are determined as unfit to military service. Patients with moderately severe, prolonged or recurrent neurotic disorders are determined as unfit to military service at peacetime and partially fitness in combat. Patients with short-term disorders respond well to treatment be granted sick leave or deferment for treatment, after which are recognized as fit for military service.

Posttraumatic stress disorder.

These are various psychic and somatoautonomic disturbances developing after some extreme psychic traumas.

This disorder follow significant traumatic events in which there is a serious injury or threat of serious injury to self or others and a feeling of helplessness and horror during the event. The traumatic events causing PTSD and ASD are sufficiently overwhelming to affect anyone (such as war, earthquake, floods, rape, serious accidents).

PTSD appears not immediately after a psychic trauma, but in a few weeks, this delay being not more than 6 months. An acute psychogenic disorder in such patients may be insignificant or even absent. Various uncontrolled and controlled events endangering the patient's life are etiological factors of PTSD. Usually these are great calamities: natural (earthquakes, hurricanes, floods, etc.), caused by man (fires, explosions, industrial accidents, train smashes, shipwrecks, etc.), as well as

“designed calamities” (wars, social riot, terrorist acts). PTSD may also develop in cases when a catastrophic situation is directed against one person (aggressions, rapes).

In ICD-10, PTSD is encoded as F-43.1. According to literature data, the morbidity rate of PTSD ranges from 10 % in catastrophe witnesses to 95 % in casualties. The cases of PTSD at peace-time make up 0.5 % among men and 1.2 % among women.

The clinical signs of PTSD develop after the patient goes out of the stress situation.

The clinical symptoms are usually seen in the following three domains:

Intrusion symptoms: These are characterized by flashbacks (individual may feel as if trauma is reoccurring) and nightmares (dreams about the trauma).

Avoidance: The patient avoids all those stimuli which can remind him of the trauma.

Arousal symptoms: These include hypervigilance, exaggerated startle response, insomnia, poor concentration.

In addition, symptoms such as emotional numbing, emotional detachment and anhedonia can also be present.

The initial period of PTSD formation is characterized by anxious-phobic states with tearfulness, nightmares, disturbances of derealization and depersonalization. The patients develop influxes of unpleasant recollections, related to the psychic trauma, often of the annoying character and usually without any outward reasons. These recollections are extremely strong in the patient's consciousness and cause in him the same feelings as the real tragedy. A very strong feeling is also caused by various reminders of what has been suffered, e.g., in films, TV broadcasts, talks of one's associates. These secondary feelings develop against a background of some emotional dullness, social estrangement, reduced responses to the surroundings, anhedonia. The patients would try to avoid such situations and thoughts which could even remotely remind the tragedy endured. They develop diffidence caused by the fear to have agonizing recollections again; as a result, the patients become less sociable and postpone taking different decisions. Their sleep is disturbed, they suffer from memory loss, distractible attention, short and hot temper.

It is hard for the patients to associate with other people, even their

relatives; they become reserved, estranged, sometimes malicious, with manifestations of outwardly unmotivated fits of aggression. At their jobs, such patients are not able to observe subordination and meet requirements of the labour discipline; in the families they are unable to share feelings of their relatives, rather often they would lose their job and family. Many of them begin to abuse liquor, narcotic drugs, toxic substances, it increasing their social dysadaptation even more. These behaviour peculiarities resemble the picture of the psychopathy-like syndrome. But typical for the patients with PTSD are anxiety, melancholia, the feeling of their own guilt, uselessness of their life, suicidal thoughts. They suffer from repeated recollections of the tragedy endured, which often appear abruptly in the form of vivid imagery representations (flashbacks) lasting for up to several hours and accompanied by expressed autonomic disorders. Many patients are afraid of falling asleep, because it is not in rare cases that “the tragedy is suffered” while sleeping. Usually the patients do not take medical advice, as they believe that the people who have not endured their tragedy are unable to understand them. In the majority of cases, recovery occurs with favourable family circumstances and good social conditions. But within the remote period there may be sleep disturbances and a pessimistic assessment of what is taking place in the surroundings. The area of brain involved in the pathogenesis of PTSD are hippocampus and amygdala.

Some psychoorganic changes caused by various vascular disorders are likely to develop. Follow-ups show that complete recovery occurs in 30 % of PTSD cases, some residual mild abnormalities are observed in 40 % of the patients, moderate ones in 20 %, and deterioration of the state takes place in 10 % of the cases.

Treatment of patients with PTSD.

Selective serotonin reuptake inhibitors (SSRIs) are the first line pharmacological treatment in PTSD. Psychotherapeutic interventions include cognitive behavioral therapy (treatment of choice), psychodynamic psychotherapy and eye movement desensitization and reprocessing (EMDR).

Within the initial period, when some required and specialized aid is given to the patients who have survived catastrophes and natural calamities, psychopharmacological therapy should be administered too. The most suitable for such cases are small doses of tranquilizers or antidepressants aimed at normalization of sleep and reduction of the mental stress.

In chronic PTSD, the following groups of drugs are recommended:

- anxiolytics: clonazepam, propranolol, clonidine;
- antidepressants: amitriptyline, imipramine, phenelzine, fluoxetine, sertraline;
- mood stabilizers: lithium salts;
- anticonvulsants: valproic acid.

Very important is psychocorrecting aid within the subacute and remote periods.

At certain stages of PTSD the patients usually do not take medical advice, as they do not regard their state as morbid and are afraid that attendance of psychiatric establishments may affect their social status. Psychological correction, at the same time, is extremely important for these patients. They should be convinced of the necessity to receive the therapy. The patient should be taught to regard his disorders as a normal response to the psychotraumatizing situation. The patient should not avoid anything connected with the psychic trauma (in particular, recollections of it), it is necessary to help him process it rationally and overcome emotionally. This work requires great tact and patience of the psychotherapist, it should be conducted with regard for cultural and national peculiarities of the people who have survived a catastrophe. Rendering of psychological aid should last from a few months to 1-2 years.

SCHIZOPHRENIA. CLINICAL FORMS AND TYPES IN THE COURSE.

TREATMENT.

ACUTE AND TRANSIENT PSYCHOTIC DISORDERS. THE FIRST EPISODIC OF PSYCHOSES.

Schizophrenia is a chronic mental disease with unclear etiology, which develops on the basis of hereditary predisposition and is characterized by changes of the personality in the form of autism, emotional flattening, reduced activity, loss of the integrity of mental processes with various productive psychopathological symptoms.

The term “**schizophrenia**” comes from Greek words “schizo”, which means “to split, crack”, and “phren”, which means “soul”. Thus, the term emphasizes the main sign of the illness: a disturbance of the integrity, unity of the mind and an inadequacy of mental responses to external stimuli.

The spread of schizophrenia among the population is from 7-8 cases in 1,000 people to 1-2%.

According to modern concepts, schizophrenia belongs to a group of genetic predisposed diseases, which origin is multifactorial. The acquired genetic predisposition each individual patient can be realized only in the interaction of internal and environmental factors.

Clinical manifestations

The most important for clinical practice is division of the schizophrenia symptoms into basic, permanent (negative), typical for all the forms of the illness, and additional (secondary, “productive”), typical for some or another form.

The Four A`s

(primary symptoms of schizophrenia described by E. Bleuler):

1. **Associational disturbances** (thought disorder)
2. **Affective disturbances** (flattering of affect)
3. **Autism**
4. **Ambivalence**

Productive symptoms are called new morbid phenomenon, some new feature, which appeared as a result of the disease, which are absent of healthy people. Examples of positive symptoms are *delusions and hallucinations, epileptiform paroxysms, psychomotor agitation, obsessions, strong sense of melancholy depression*. Productive symptoms are quite dynamic. It can dramatically increases in exacerbation of the disease, and then disappears by itself or influenced by appropriate treatment. Most psychotropic drugs used in psychiatry are intended for the treatment of productive

symptoms. Productive symptoms tend to be less specific, so it may be similar in a few different diseases.

Negative symptoms (defect, minus-sign) are called defect that occurs due to illness in healthy natural functions of the body, loss of any ability. Examples of negative symptoms is inability to experience vivid emotional feelings (*apathy*). Negative symptoms are usually irreversible. These symptoms indicate the duration of the disease and the depth of destruction of the mentality. Character of negative symptoms is specific and plays an important role in the diagnosis of schizophrenia.

Autism is disconnection of the personality from the environment, loss of contacts with other people, shutting oneself off, self-reservation, absorption into one's own world of the person's mannered autistic feelings. The patient becomes silent, avoids any contacts with other people, because he feels better alone. Even with the relatives, the verbal contact becomes formal, poor.

Emotional disorders are expressed in a gradual impoverishment of emotional responses. At first, higher emotions (compassion, altruism, emotional sympathy) are affected. Later the patients become cooler and more egoistic. They lose any interest in events at their job and their family. Severe cases develop emotional bluntness with an absolute indifference to the environment and one's own fate. Against a background of a significant impoverishment of the emotional life, some inadequacy and paradoxicalness of emotional responses is notable. The patient would laugh in an improper situation, quietly state the events which are sad for him and other people, but inadequately and often violently respond to quite insignificant causes. As a result of the splitting process in the emotional sphere, the schizophrenic can simultaneously combine two contradictory feelings: he loves and does not love, he is angry and happy, cheerful and depressed (ambivalent). The patients' mimics do not correspond to their feelings (paramimia), but demonstrates a splitting of their integral emotional mimic reactions. Emotional modulations of the voice and nuances of the intonation are lost; the patients would say about stirring and indifferent things in the same tone (a "wooden voice"). The style of dressing often changes too. Some patients become untidy, careless, while others begin wearing extremely extravagant and flashy clothes, losing even elementary tact and taste.

	Productive symptoms	Negative symptoms
<i>Disorders of sensation and perception</i>	<p>anesthesia, hypohallucinations, depersonalisation, derealisation</p>	<p>active feeling of self-estrangement (depersonalisation)</p>

<i>Thought disorders</i>	Disturbance of thoughts, mentism, thought blocking, persecutory delusions (delusion of control), overvalued ideas, obsessions	Paranoia, ambivalence, reasoning, echolalia, obscurity of speech, paralogia, symbolism, philosophical digression, pontifical mannerism, illness (up to incoherence)
<i>Affective disorders</i>	Excitement, perplexity (acute confusion), mania or depression may be, but not specific	Ambivalence, decreased affect, monotonous, flattering and ingratitude of affect), apathy
<i>Disorders of will and behaviour</i>		Ambivalence, loss of will and energy, abulia, parabulias, unexpected sexual behaviour, helplessness, passivity
<i>Memory disorders</i>	Atypical	
<i>Disorders of cognition</i>	Atypical	
<i>Disorders of motor behaviour</i>	Stupor (stupor, excitement, cataplexy-symptoms)	Adaptive movements (mannerism)
<i>Disorders of consciousness</i>	Disorientation, oneiroid	Atypical

A splitting of thinking also manifests itself by contradictory judgements and double orientation. In a long course of the illness in the defect state there may be absolute destruction of the thinking and speech. As a result, not only laws of meaning are violated, but syntactical and grammar ones are affected too (a “verbal crumb”).

Typical for schizophrenic thinking are symbolization, formation of new concepts, and compression of concepts. A disposition to futile judgments, empty fruitless philosophizing without any logic sense, abstract thinking, its estrangement from the reality, very abstract or strictly concrete generalization is observed.

Schizophrenics write in a very peculiar way too. Sometimes from left to right. Their writing abounds in mannered, ornate letters, underlining, exclamation marks, small vertical lines, symbolic designations and drawings.

The rate and course of thoughts are affected. Some patients reveal a flow of thoughts with a feeling of their artificial character – *mentism*, or disappearance of thoughts with a feeling of emptiness in the head – *sperrung*. Rather often are *perseverations* (repetition of the same words), *verbigerations* (repetition of the same phrases), and ornate expressions. The symptoms of “*open thoughts*” and “*sounding thoughts*” are observed; the patients state that their thoughts are read by people nearby, known for everybody.

Disorders in **the effector-volitional sphere** manifest themselves by a reduction in the purposeful activity (*hypobulia* and *abulia*), it being attributed to a “*lower power potential*”. The patients feel it more and more difficult to study and work. Any activity, mental in particular, requires much effort. Concentration of attention is very difficult. Communication with other people is tiresome. As a result, there are increasing problems in studies, professional degradation, or absolute incompetence in severe cases, the formal functions of the intellect being preserved.

Splitting of the mind is reflected by the patients’ behavior. In patients with schizophrenia, the struggle of motives in a volitional act is prolonged or does not end at all, so it makes taking of a decision impossible. It is shown by *ambitendency*, when the patient is unable to make any action because two opposite tendencies occur in him. In order to enter the doctor’s room, the patient would open the door, but immediately afterwards close it; he would make a step forward, and then back. He would like to shake somebody’s hand, but then take his hand off. The patient’s instinct life changes, the food, sexual and self-preservation instincts are reduced. Male patients at the age of 30 and older usually do not live a sexual life; as a rule, they masturbate and later regard it as the cause of their illness. Sometimes the sexual instinct is increased and insufficiently differentiated, with resultant homosexuality and disordered sexual life. A higher sexual instinct in women causes their moral degradation earlier, than their morbid state becomes evident. The food instinct is reduced or distorted. In cases of a long course of the process the perversion may reach to coprophagia. The instinct for self-preservation may be increased, as it is demonstrated by aggressiveness, suicidal acts, self-injuries.

A purposeful activity is always affected to some or another degree. Typical for the patients is their strange behavior, absence of usual logic motives. Such patients often astonish with their absurd actions, though their formal intellectual functions are sufficiently preserved. A sensation of estrangement of their own thoughts, feelings and actions is a peculiar kind of the activity disorder. Some part of the mental activity is felt by the patient as not belonging to him, taking place independently of his will, automatically, against his intention (*Kandinsky-Clérambault syndrome*). Thus, a female

patient, who sometimes shouts, dances, swears, states that all these things are done not by her, but the doctor who seized her will and directed her. She knows that she says and does “unnecessary things”, but this is because there is some foreign object in her larynx, “my larynx obeys somebody’s will”. Other patients say that “somebody decides in advance “what I must do”, they “are forced to think, remember, act”. Depersonalization symptom develops: a feeling of splitting of one’s own “ego”. The patient feels two “egos” inside him, says about himself in the third person, “he wants to eat, he went”, uses various family and first names for himself, states that together with his “ego” another one lives in him.

Besides the changes typical for schizophrenia, various productive (delirious, catatonic, hebephrenic and affective) symptom complexes appear and regularly change into one another in the course of the illness; they are responsible for the form of schizophrenia.

Clinical forms of schizophrenia.

Paranoid (F20.0) is the commonest form. Hallucinatory-paranoid symptoms develop against a background of mental splitting. The symptoms typical for this form are revealed at the age of 20-40. The appearance of the productive symptom is preceded by suspiciousness, over-anxiousness about one’s health, captiousness, and hypochondria. Exacerbation begins with the appearance of insomnia, anxiety, nervousness, shortness of temper. Against a background of a change in the general condition, there is development of the feeling of an environmental change, appearance of some barrier between the patient and the world. Delusions of reference, persecution, affection and poisoning develop. The patient states that his relatives and friends have changed their attitude to him; everybody in the street pays attention to him, watches him, points at him, and talks about him. The delusions manifest themselves by the patient saying that his organism or mind is subjected to the influence of hypnosis, electrical current, some invisible energy. Sometimes these delusions astonish with their absurdity. The patient may state that having touched door handles he caught syphilis or AIDS, that some animal started living inside his body, that his internal organs have rotten, the food is not digested, “there are piles of pills in my stomach”. In the onset of the illness the delusions are of an unsystematized and fragmentary character, with time they take a form of some system, often queer-symbolic, with ideas of power, grandeur, reforming; i.e. they get paraphrenic features. The delusions are accompanied by verbal hallucinations and illusions: “they talk about me”, the patients hear somebody calling their names, some words and phrases, “voices”. The latter directly concern the patient, condemn, frighten, threaten him, often are imperative. They, particularly the frightening and imperative ones, create some anxious mood, arouse fear. Often paranoid

schizophrenia develops Kandinsky-Clérambault syndrome: a combination of psychic automatism, pseudohallucinations and delusions of affection, estrangement of one's own thoughts, actions and "ego", the patients say about themselves like about an externally controlled automaton. Pseudohallucinations differ from real ones by the fact that the "voices" are heard inside the head and body parts, with their "inner sight" the patients see some figures and parts of their internal organs. Rather common are tactile hallucinations and cenesthopathies. The patient feels that his head, throat and genitals "are pierced with electrical current", the internal organs are twisted, burst, etc. Olfactory and gustatory hallucinations are not common, but they are particularly unpleasant. The patient feels even smells exhaled by himself rather than by the outside world only (smells of a corpse, intestinal gases, blood, decomposed sperm, etc.). These hallucinations are particularly typical for an unfavorable course of the illness. Visual hallucinations are rare. Usually they are fragmentary, colorless, non-scenic; more frequently the patients see faces or their parts, figures. The patient says that he saw through the wall, a flap of the overall and the hand, and knew that it was the doctor's hand which "drew a white line of my temperature curve on a white wall with chalk". Another patient "saw" some bent figure and knew that it was his dead brother, etc. Illusions are rather commonly observed. The patient would take a knock at a door for a shot, explosion; the patient with delusions of persecution would perceive clattering of kitchen utensils as clanking of weapons.

In compliance with the contents of the delusions and hallucinations, the patient's behavior changes. He can be dangerous for both himself and other people. Under the influence of imperative hallucinations the patient would refuse taking food, inflict self-injuries, and commit suicide. Delusional motives may make the patient be aggressive, kill somebody. It is not in rare cases that the patients would dissimulate their feelings for years; as a result, they may be prematurely discharged with severe consequences.

Hebephrenic (F20.1) is the most malignant form of schizophrenia, which begins at the juvenile or young age. This form is characterized by senseless foolish behavior, emotional disorders in the form of rough inadequate emotions, foolishness, absurd grotesque hilarity, which does not involve other people but astonishes and frightens them. Typical for hebephrenic excitement are purposeless grimacing, clowning, somersaulting. The patients would jump on their beds, roll on the floor, try to hit, laugh at once, shamelessly bare themselves, and masturbate. They are untidy, slovenly and voracious, may purposely urinate and defecate in the beds. Turns of their speech, intonation in particular, are pretentious, they would speak in an unnatural voice, lisp like children, torture words and use obscene ones. Their thinking is poor, paralogic and stereotyped. Thus, a patient may jump on one leg, beat himself on the face, laugh and stereotypically repeat "twice two is a rabbit". Sometimes the patients' speech resembles

a senseless set of words or phrases. This form of schizophrenia starts in puberty (13-15 years), course of the disease without remission, patients state invalidity vary quickly.

Hallucinatory-delirious manifestations are fragmentary and astonish with their absurdity. A sudden transition from foolishness and euphoria to hypochondria is often observed. This form is characterized by an extremely unfavorable prognosis and usually rapidly (during 1-2 years) results in disintegration of the personality and dementia.

Catatonic form (F20.2) begins at a young age and manifests itself by an alternation of catatonic excitement and catatonic stupor. In recent years the typical kind of this form has been seldom observed. Catatonic excitement is absurd, stereotyped, and purposeless. The patients are impulsive and unreasonably aggressive; they would shout and make faces. Their movements and gestures are monotonous, stereotyped and awkward. Particularly mannered and pretentious is the patients' gait: with jumps, stops and swift impulsiveness. The thinking is noncontiguous and paralogic, the speech is stereotyped, has verbigerations (repetitions of the same phrases, words and gestures) and neologisms. The patients would repeat words (echolalia) and gestures of the other people (echopraxia). They would stubbornly resist everything, make the opposite to what they are asked about (active negativism), often tear off their clothes, and make self-injuries. Catatonic stupor is absolute immobility with muscular tension, mutism, negativism, refusal to eat. The patient would often lie in the embryonal position, resist any attempts to change it (active negativism), on examination actively resist taking his pulse and temperature and feeding him, would not follow instructions (passive negativism). Feeding in such cases is performed through a tube. Phenomena of catalepsy (wax flexibility) are observed: preservation of the position, given to the body, extremities or head, for an indefinite period of time ("air pillow"). Consciousness during the stupor may be absolutely preserved, and after the stupor passes away the patients describe in detail everything that took place. Catatonic-oneiroid states are characterized by immobility and somnolent cloudiness of consciousness. Various fantastic, often catastrophic situations are experienced (war, earthquake, shipwreck), where the patient does not participate and only observes them, but at the same time "feels particular responsibility for everything that takes place". The expression of horror on the face changes into some interest and ecstasy depending upon the contents of hallucinations. The patients can describe their feelings later, they perceive real events in a fragmentary way, and the environment is perceived in compliance with the dream-like fantasies (other patients were taken for extraterrestrials, the hospital itself for some camp, etc.).

Simple form (F20.6) is the brightest manifestation of the basic symptoms of schizophrenia: a reduction of volitional activity, affective bluntness and disturbances of thinking, whose totality is designated as the apathoabulic syndrome. The illness begins

gradually, more frequently in children and youths. Listlessness, apathy and indifference augment. The patients begin studying bad and missing classes, they develop a disposition to prolonged idleness, spend a larger part of the day in bed, become still more reserved, silent, lose social relations and friends. Emotions grow dull; indifference and even some hostile attitude towards the relatives appear. They lose any interest in their clothes and outward appearance, become slovenly, do not wash themselves, do not change their underwear, sleep with their clothes on. They lose diffidence, develop a disposition to impulsive actions and vagabondage, in some cases openly masturbate. The behavior becomes absurd; as a rule, the patients have neither any plans nor prospects, but it does not upset them, also they are not troubled by the fact that being young and physically healthy they live at their parents' expense and do not help them at all.

Besides, the patients may develop absurd and strange interests, which do not correspond to their age and position, as well as a disposition to scholastic fruitless judgments (philosophizing), contradictory statements. Their thinking is characterized by sliding down to an unexpected subject and breaks in thoughts. The patients' appearance is peculiar, their movements are awkward, expressiveness of mimic responses is lost, the voice becomes monotonous (a "wooden voice"). Productive symptoms (delusions and hallucinations) are seldom observed, they are rudimentary, short-term and do not produce any effect on the course of the disease. The prognosis is often unfavorable, because the simple form is diagnosed late and the patients are admitted to hospital already having signs of the defect formed.

The types in the course of schizophrenia are distinguished depending upon the progression of the illness, the rate and degree of augmentation of schizophrenia symptoms, peculiarities in its clinical syndromes which prevail in the picture of the disease.

Process schizophrenia is characterized by progressively augmenting schizophrenic changes and absence of any spontaneous responses. Remissions usually result from treatment and last till supporting therapy is given. The degree of progression varies: from a slow course with slight changes in the personality to deep devastation and its destruction. Particularly malignant is the course of schizophrenia which began in children and youths: malignant hebephrenia, hallucinatory-paranoid, simple forms.

Paroxysmal progressive schizophrenia is characterized by a paroxysmal course. The attacks last from 2-3 weeks to a few months and alternate with light periods, remissions, whose duration ranges from 1-2 weeks to several months and even years. The quality of the remissions is various. They may be complete (a practically full recovery) or incomplete (with signs of schizophrenic defect or residual phenomena of

the attack). With every new attack the quality of remission becomes lower, and the attack itself acquires new unfavorable (hebephrenic, hallucinatory-paranoid, schizophrenic) symptoms.

Recurrent (periodical) schizophrenia is characterized by attacks of atypical depressive or maniac phase with stable remissions. Eventually, the attacks become more frequent and prolonged. This course is typical for schizoaffective psychoses.

Types of remissions. Depending upon the degree of reduction of psychotic symptoms and expressiveness of dissociative-aphathetic disorders, a remission can be complete, incomplete or partial.

Complete remission (remission A) is a complete reduction of productive psychotic syndromes with insignificant expressiveness of negative symptoms which practically do not change the patient's capacity for work, his family and everyday life; occupational reorientation is necessary only in some cases.

Incomplete remission (remission B) is a complete reduction of productive psychotic syndromes with moderately expressed changes necessitating rehabilitative measures: a change of profession (work with limited loads), or getting a job at special shops of industrial enterprises.

Remission C is a significant reduction of psychotic symptoms (residual delusions, which lost their actuality, and some hallucinatory phenomena are possible) with an expressed apathetic-dissociative defect plus a loss of capacity for regular and professional work. The patients are adapted to work at medical industrial workshops of mental and day hospitals.

Partial remission (remission D), an intrahospital improvement, is characterized by only an insignificant improvement of the state with some loss of actualization of psychotic phenomena. The patients are subject to further treatment at in-patient department.

The differential diagnosis of schizophrenia must be based, first of all, on specific negative symptoms: autism, emotional impoverishment and inadequacy, reduced activity, disturbances of thinking, such as splitting, paralogism, philosophizing, symbolism. The expressed polymorphism and changeability of productive psychopathological symptoms make them less reliable diagnostic signs of the illness. Diagnosing also takes into account the dynamics of the disease characterized by a progressive course and augmentation of negative symptoms of deficit. Manifestations of the illness are often preceded by psychic traumas, previous brain injuries, infectious diseases, and intoxications. In this connection, schizophrenia has to be differentiated

from reactive (psychogenic), organic (somatogenic, infectious) psychoses. Situational psychoses (reactive paranoid, reactive depression) are characterized by psychological clarity of morbid feelings; they reflect the contents of a psychotraumatizing situation and disappear after its solution. Typical for the course of exogenous-organic psychoses is prevalence of asthenic symptoms, hallucinatory (more frequently visual) disorders, syndromes of disturbed consciousness (delirious, twilight) and memory, personality changes by the organic type.

The simple form of schizophrenia at certain stages of its course may resemble manifestations of psychopathy and protracted neuroses, asthenoapathetic depression. The differential diagnosis is facilitated by a careful study of the case history, dynamics and typical schizophrenic changes in the emotional and cognitive functions. Schizoaffective psychoses are differentiated from the manic-depressive one. Appearance of acute imagery delusions, hallucinations, delusions of persecution, phenomena of psychic automatism and catatonic disorders in the structure of an attack, as well as formation and augmentation of personality changes between attacks tilt the diagnosis in favour of schizophrenia.

Febrile schizophrenia has to be differentiated from symptomatic (somatogenic) psychoses. In all its cases, febrile schizophrenia begins with catatonic excitement or substupor with oneiroid cloudiness of consciousness, these symptoms being untypical for symptomatic psychoses, where the above disturbances develop at certain stages of the illness against a background of a severe somatic state, shortly before the lethal outcome. Febrile schizophrenia should be differentiated from the malignant neuroleptic syndrome with hyperthermia as a result of treatment with neuroleptics (particularly haloperidol and other derivatives of butyrophenone), often with large doses, but this syndrome may develop even after small doses in cases of sensitivity to the drug.

Postpartum psychoses, caused by puerperal sepsis, should be differentiated from schizophrenia provoked by pregnancy and delivery. The presence of delirious episodes and catatonic disorders at the height of amentia are the signs in favour of symptomatic psychosis, whereas the development of amentia after catatonic excitement is more typical for schizophrenia. If a psychosis develops 2-3 weeks after the delivery and later within an uneventful puerperal period, the diagnosis of postpartum psychosis is doubtful. Acute polymorphous schizophrenia may have much in common with infectious and intoxication-induced psychoses. The final diagnosis is made in the process of a long-term supervision.

The differential diagnosis of schizophrenia must be carried out mainly in three directions distinguish from organic disease (trauma, intoxication, infection, atrophic

processes, tumors), affective psychosis (in particular, bipolar affective disorder) and the functional psychogenic disorder (neurosis, psychopathy and reactive states).

Peculiarities of childhood-onset schizophrenia

The signs and symptoms of childhood schizophrenia are nearly the same as adult-onset schizophrenia. Some of the earliest signs that a young child may develop schizophrenia are lags in language and motor development. Some children engage in activities such as flapping the arms or rocking, and may appear anxious, confused, or disruptive on a regular basis. Children may experience symptoms such as hallucinations, but these are often difficult to differentiate from just normal imagination or child play. It is often difficult for children to describe their hallucinations or delusions, making early-onset schizophrenia especially difficult to diagnose in the earliest stages. The cognitive abilities of children with schizophrenia may also often be lacking, with 20% of patients showing borderline or full intellectual disability.

Very early-onset schizophrenia refers to onset before the age of thirteen. The prodromal phase, which precedes psychotic symptoms, is characterized by deterioration in school performance, social withdrawal, disorganized or unusual behavior, a decreased ability to perform daily activities, a deterioration in self-care skills, bizarre hygiene and eating behaviors, changes in affect, a lack of impulse control, hostility and aggression, and lethargy.

Auditory hallucinations are the most common positive symptom in children. A child's auditory hallucinations may include voices that are conversing with each other or voices that are speaking directly to the children themselves. Many children with auditory hallucinations believe that if they do not listen to the voices, the voices will harm them or someone else. Tactile and visual hallucinations seem relatively rare. Delusions are reported in more than half of children with schizophrenia, but they are usually less complex than those of adults. Other symptoms of the disorder include problems paying attention, impaired memory and reasoning, speech impairments, inappropriate or flattened expression of emotion, poor social skills, and depressed mood. Such children may laugh at a sad event, make poor eye contact, and show little body language or facial expression. Children with schizophrenia experience difficulty in managing everyday life. They share with their adult counterparts psychotic symptoms (hallucinations, delusions), social withdrawal, flattened emotions, increased risk of suicide and loss of social and personal care skills.

Treatment

The system of therapeutic measures in schizophrenia is conventionally divided into separate stages: controlling therapy is directed at regressing psychotic symptoms;

stabilizing therapy is the period of restoration of the previous level of psychological, social and occupational adaptation; preventive (maintenance) therapy.

Schizophrenics can be treated both as in- and outpatients. The treatment must be complex: with use of both psychoactive drugs and such methods of treatment which are directed at the normalization of the somatic sphere, vascular, neurodynamic and other processes. The treatment is to be provided proceeding from the basic psychopathological syndrome, the clinical form, course and stage of the disease, the patient's age, his somatoneurotic state. Therapy with psychoactive drugs is the basic method of active (biological) therapy.

At the mental disorders with prevalence of delusions, hallucinatory manifestations, expressed psychomotor excitement are indicated neuroleptics: risperidonum, quetiapinum, olanzapine, haloperidol, chlorpromazine, clozapine, fluanxol, clopixon, amisulpiride, etc. For schizophrenia and chronic delusions disorders, there is a need prolonged maintenance treatment. In this case, uses long-action neuroleptics: Clopixon-depot, Moditen-depot, Fluanxol-depot, Haloperidol-decanoate, Rispolept Konsta, Xeplion, Zyprexa Relprevv (1 injections are given every 2-4 weeks). Doses are selected individually depending on individual sensitivity. In cases when negative mental disorders are prevalent, antipsychotics with stimulating effect are prescribed, as well as atypical antipsychotics (risperidone, clozapine).

Treatment with neuroleptics may give rise to complications in the form of the neuroleptic syndrome: parkinsonism, akathisia, dystonic phenomena. Parkinsonism is controlled with correctors: acineton, ciclodol, triphen.

In recent years, atypical antipsychotics are used in therapy of schizophrenia: risperidone (Rispolept), ziprasidoni (Zeldox), olanzapine (Zyprexa), azaleptin (Leponeks), amisulpride (Solian), quetiapine (Seroquel), aripipraole (Abilify), paliperidonum (Invega) which, in contrast to typical neuroleptics, affect not only the productive symptoms, but atypical antipsychotics also reduce the negative symptoms as well as they lead to develop various complications very rarely. In this way, atypical antipsychotics have a positive effect on patients' quality of life.

Rehabilitation includes measures for preservation (in case of its loss – at least, partial restoration) of the patient's social status, including his capacity for work, family relations, an active life in the society. A complex of rehabilitative measures is conducted at all the stages of treatment. It consists of the maximally possible lessening of restrictive measures for the patients; e.g., their staying at some closed department or observation ward, as well as an active involvement of occupational, culture and group therapy, as acute manifestations of the illness are controlled. Therapeutic vacations with

a possibility to spend weekends at home should be widely used, or the patients should be transferred to day hospitals. Hospitalization should last as little as possible, because a long-term stay at mental hospital may cause a loss of social skills and an ability to live independently, it suppresses the wish to work, it may break family relations, i.e. result in hospitalism.

Very important is to have an adequate job, which should correspond to the patient's state. Even in incomplete remission and maintenance therapy it is necessary that students go on their studies and working people work under relieved conditions (studies at night school, at home, work at home, at medical industrial workshops, work with an incomplete load). Labour restrictions should depend upon the sphere of activity or study.

The primary prophylaxis consists in sanitary-educational work: marrying schizophrenics should be informed about a risk of the disease in their posterity, a necessity to receive genetic consultations, as well as about a risk of falling ill as a result of using hashish or amphetamine. The secondary prophylaxis is aimed at prevention of relapses through maintenance treatment and a healthy way of life. The tertiary prophylaxis includes social-rehabilitative and therapeutic measures at the stage of remission with the purpose to prevent formation of a defect.

Forensic psychiatric examination. Accordingly, the law, the concept of insanity is defined as follows:

1. Insanity means the absence the capacity of correctly control one's own actions and be aware of them.

2. Person, who have been insane during the socially dangerous unlawful action - could not be conscious of the actual nature and social danger of his actions (inaction) and control them caused by schizophrenia is not held criminally responsible,

3. The court assigns compulsory medical measures for a person who has committed under criminal law a socially dangerous act in the state of insanity

The medical labour examination. Expert is required to detailing examine of previous social-labor behavior of the patient with schizophrenia and the prognostic value of his clinical condition to address the issue of his disability. All this will make the right expert conclusion. In case of a persistent reducing of capacity to work of the patient with schizophrenia, expert should also determine its degree.

Medical military psychiatric examination. People are suffering from schizophrenia are determined as unfit to military service

Schizotypal disorder F21 Differences between schizophrenia and schizotypal disorders are far from being always marked. A supposition is made that a patient with schizotypal disorder has some genetical predisposition to schizophrenia, in a favourable social situation he is not decompensated and only subpsychotic manifestations are observed in him. In stress situations the patients may be decompensated, they develop short-term psychotic symptoms, the suicide rate being 10 %. The diagnosis of schizotypal disorder is based on the presence of at least 4 of the following signs in the clinical picture during more than 2 last years:

- 1) emotional coldness, not always adequate situations of personal contacts;
- 2) eccentric strange behaviour and appearance;
- 3) a tendency to avoid social contacts;
- 4) strange, often metaphysical thoughts which do not conform to subcultural norms;
- 5) mistrustfulness, suspiciousness;
- 6) annoying reflections on one's own personality with dysmorphophobic, sexual or aggressive contents;
- 7) unusual feelings, phenomena of derealization and depersonalization;
- 8) diffuse thinking which does not reach to the extent of non-continuity;
- 9) periodical transitory subpsychotic episodes (more frequently with illusions, hallucinations, delusion-like ideas).

The differential diagnosis of schizotypal disorders with schizophrenia and schizoid psychopathy is extremely difficult, therefore ICD-10 adequately does not recommend to widely use this item of the classification.

Chronic delirious disorders F22. These are disorders with dominating, encapsulated and systematized delusions without any marked change in the personality. Their rate is 25-30 cases per 100,000 of population. The disease begins at a middle age, oftener at 30-40 years. The patients seldom take medical advice, more frequently they are sent by their relatives.

Often the onset of the disease is triggered by an unfavourable psychological situation. The patients may express delusions with various contents. The system of the delusions may have different degrees of their complex character. The illness is notable for absence of formal disorders of thinking, though delusions are often expounded

loquaciously, thoroughly and whimsically. The patients may be aggressive and dangerous for other people. Suicidal tendencies are not rare. There is no criticism to delusions. Besides the acts and opinions reflecting the contents of delusions, the patients' behaviour does not differ from the normal one. Emotional feelings correspond to the contents of delusions, which most frequently are of a pure personal character. Delusions may be of the kinds described below.

Erotomaniac delusions, delusions of love charm. The patients are convinced that some person with a high social status (some chief, celebrity, businessman, etc.) is in love with them, though often they are not even acquainted with him. The feeling is expressed in spiritual relationship and romantic love, rather than sexual attractiveness. Often the patients try to establish a contact with the object of their delusions. These disorders are more typical for women. Delusions of grandeur. The patients are sure that they have exceptional abilities and talent which are not recognized by other people. They declare that they have made some discovery important for the mankind, that they maintain special relations with celebrities or deities, often becoming leaders of religious sects. In delusions of jealousy (Othello's syndrome) the patients would look for adultery, spy on their spouses, often manifest aggression with respect to their spouses or lovers. Delusions of persecution are often accompanied by litigious behaviour or aggressiveness towards the people who, as the patient thinks, harm him. Patients with hypochondriacal delusions are sure that they give off a bad smell, that the functioning of their internal organs is affected. They would visit various internists asking for help.

The psychosis lasts at least 3 months, or the whole life in some cases. The etiology of the illness is unknown; suppositions about its biological origin have been made. As a rule, the treatment is symptomatic, with administration of antipsychotic drugs and antidepressants. Suicidal and aggressive tendencies in the patients are indications for hospitalization.

Acute and transitory psychotic disorders F23. The onset of psychotic states is acute. The clinical picture is characterized by delusions, hallucinations, excitement, non-continuous thinking. The morbid state lasts less than 3 month. Acute and transitory psychotic disorders may end with a practically full recovery, a complete restoration of the capacity for work and socialization.

PRIMARY POLYMORPHIC PSYCHOTIC EPISODE

A heterogeneous group of disorders characterized by an acute manifestation of psychotic symptoms - delusion, hallucinations and other perceptive disturbances, as well as a significant violation of general behavior. The psychotic state occurs for the first time in life and is characterized by an acute onset. Its appearance may be associated

with acute stress, but often such psychoses begin endogenously and are determined by internal matters. The period from the onset of the first signs to the acute psychotic symptoms is less than 2 weeks. The clinical signs don't meet the criteria that are typical for other psychoses (affective, organic, psychoactive substances induced, etc.). There are a lot of unstable psychotic symptoms that succeed each other or coexist simultaneously (delusion, hallucinations, impaired thinking, psychomotor agitation, and others). Currently, this diagnosis is the most common during the first hospitalization of a patient with psychotic signs in a mental hospital. The frequency of diagnosis ranges from 4 to 6 cases per 1000 population per year.

Clinical signs. Usually the first psychotic signs are anxiety, insomnia, and confusion. Within two weeks, acute delusion ideas appear. Their structure is changing rapidly. The ideas of relationships, meaning, persecution, that everything around is specially staged as in a theater, false recognition and the delusion of a double (Capgras syndrome) arise against the background of a mythological symbolic misinterpretation of reality. Usually the patient finds himself in the center of the events. Hallucinations, auditory complete and pseudohallucinations are not stable and quickly replace each other. Amnesia is absent, although the patient does not immediately talk about the experience. He is gradually recalling it. The insight is absent. Some patients may have schizophrenic signs. The duration of the psychotic state is less than 3 months. If psychosis lasts over 3 months, the diagnosis should be reconsidered for another, considering the clinical signs and the genesis of mental disorder (including schizophrenia).

Prognosis. Recovery usually occurs within 2 or 3 months, sometimes within weeks. But in some patients one year after the development of the primary psychotic episode it's transformed into an affective disorder (approximately 10%), schizophrenia (approximately 25%), or have repeated psychotic episodes (approximately 10%). That is, acute psychotic attacks often turn out to be the initial stage in the development of various mental disorders.

Treatment. Treatment should include pharmacotherapy and psychosocial adaptation - psychotherapy, psychoeducation. Drug treatment should be started as soon as possible. Psychomotor agitation should be interrupted within the first 48 hours. In the acute period antipsychotic therapy is prescribed. Its purpose is to stop acute psychotic symptoms. After that the supportive treatment is prescribed for a long time to prevent repeated psychotic relapse. Psychotherapeutic intervention is mandatory. At the first stages this is mainly psychoeducation, conversation with the patient's relatives. It's aimed at changing the patient's maladaptive behavioral patterns, and work with patients' families to improve the social adaptation.

The criteria for the quality of treatment are clinical - the degree of psychopathological signs' reduction for at least 6 months and the mental state stability for 6 months; social - the degree of autonomous social functioning ability.

A. Acute psychotic disorders: There are disorders which have symptoms (e.g. delusions, hallucinations and disorganization symptoms) similar to schizophrenia, however do not meet the duration criterion. These disorders have been classified separately in DSM-5 and ICD-11. These disorders frequently are preceded by a **stressor** (stressful life event), have an acute onset and often resolve completely. These disorders may also be precipitated by **fever**.

In ICD-11, if the symptoms (delusions, hallucinations, disorganization) are present for less than one month, a diagnosis of **acute and transient psychotic disorder** is made.

In DSM-5, if symptoms (delusions, hallucinations, disorganization) are present for less than one month, a diagnosis of **brief psychotic disorder** is made; and if symptoms last between **1-6 months**, a diagnosis of **schizophreniform disorder** is made.

Treatment: Antipsychotics and benzodiazepines are used for the treatment of acute psychotic disorders.

B. Schizoaffective disorder: Schizoaffective disorder has features of both schizophrenia and mood disorders concurrently. Depending on whether manic episode or depressive episode is present along with schizophrenia symptoms, there are two subtypes:

- **Schizoaffective disorder (Bipolar type or manic type):** With manic symptoms
- **Schizoaffective disorder (Depressive type):** With depressive symptoms.

Treatment: It involves combination of mood stabilizers, antipsychotics and antidepressants depending on the presentation. In schizoaffective (manic type episodes) a combination of antipsychotics and mood stabilizer is commonly used. In schizoaffective (depressive type episodes) a combination of antipsychotics, and antidepressants is often used.

C. Delusional disorder: These disorders are characterized by development of either a **single delusion** or a **set of related delusions**, which are usually persistent and sometimes are life long. Other psychotic symptoms like hallucinations, disorganization, negative symptoms are usually absent. If hallucinations occur they are for a very short duration, presence of frequent hallucinations goes against the diagnosis of delusional disorder. The following are the risk factors for development of delusional disorders:

- a. Advanced age

- b. Social isolation
- c. Sensory impairment or isolation (e.g. auditory or visual disturbances)
- d. Family history of delusional disorder
- e. Recent immigration
- f. Certain personality features, like excessive interpersonal sensitivity (even trivial interpersonal problems cause lot of negative emotions)

The following are the types of delusional disorder:

- **Persecutory type:** Delusion of persecution.
- **Jealous type:** Delusion of infidelity.
- **Erotomanic type:** Delusion of love.
- **Somatic type:** Patient may have delusion that he is infested by parasites (**delusional parasitosis**), that he has misshaped body parts (delusion of dysmorphophobia) or that his body has a foul odor (**delusion of halitosis**).
- **Grandiose type:** Delusion of grandiosity.
- **Unspecified type:** In patients where the above- mentioned categories are not applicable. Delusion of misidentification is an example of unspecified type. Delusion of misidentification can be of many types like:

Capgras syndrome: Patient believes that a familiar person has been replaced by an impostor. For example, a patient believed that his wife has been replaced by a stranger who looks exactly like his wife.

- **Fregolis syndrome:** Patient believes that a familiar persons are can change his physical appearance and disguise as a stranger, and that he can take multiple different appearances. For example, a patient saw a beggar, and claimed that his brother is following him in the guise of the beggar.
- **Syndrome of intermetamorphosis:** Patient believes that people can undergo changes in physical and psychological identity and become a different person altogether.
- **Syndrome of subjective doubles:** Patient believes that he has many doubles who are living life of their own.

The patients of delusional disorder are usually able to **function normally in domains which are unaffected by the delusion**. For example, a patient with delusion of infidelity may incessantly doubt his wife and fight with her, however he may be perfectly normal at work place.

Treatment: Antipsychotics are the drug of choice.

Shared psychotic disorders (or induced delusional disorder): This disorder is characterized by spread of delusions from one person to another. The individual

who has the delusion (the primary case) is typically the influential member of close relationship with a more suggestible person (the secondary case) who also develops the delusion. When two people are involved, the term "**folie a deux**" is used. Occasionally more than two individuals are involved (known as **folie a trois**, **folie a quatre**, etc.).

Attenuated psychosis syndrome: Attenuated Psychosis Syndrome has been included in DSM-5 as a condition that needs further study before it can be included as an official diagnosis. The proposed criterion for this condition include, the following:

1. At least one of the following symptoms is present in attenuated (less severe and transient) form, with relatively intact insight,—a. delusions b. hallucinations, c. Disorganized speech . [Here attenuated means that, for example, if delusions are present patient may appear suspicious at times (transient) but not always and he may be made to question his beliefs (less severe, not fixed)]. Symptom(s) must have been present at least once per week for the past month.

Symptom(s) must have begun or worsened in the past year.

Symptom(s) is sufficiently distressing and disabling to the individual to warrant clinical attention.

AFFECTIVE DISORDERS. CLINICAL MANIFESTATIONS, TYPES IN THE COURSE. TREATMENT

Affective disorders in the form of maniae and melancholiae were known in ancient times. They were vividly described by Hippocrates and regarded as separate diseases. On the basis of clinical observations and researches, Kraepelin (1896) concluded that maniac and melancholic attacks without a progressive course are the same disease termed by him as manic-depressive psychosis. Still the modern psychiatry uses such designations as “affective psychosis”, “phase psychosis”.

Classification of affective disorders by ICD-10

F3 Affective disorders (mood disturbances)

F30 Maniac episodes

F31 Bipolar affective disorder (**BAD**)

F32 Depressive episodes

F33 Recurrent depressive disorder

F34 Chronic (affective) mood disturbances, including cyclothymia (F34.0) and dysthymia (F34.1)

F38 Other (affective) mood disturbances

F39 Unspecified (affective) mood disturbances

A bipolar affective disorder (BAD) is an endogenous disease characterized by alternation of outwardly contradictory states or phases, maniac and depressive, with presence of a light interval between them (the bipolar course). In other cases, the illness may manifest itself only by its maniac or depressive phases (the monopolar course). In any type of the course there is no progression and destruction of the personality. Bipolar affective psychosis is characterized by a seasonal prevalence in the appearance of phases (oftener in spring or autumn), the number of phases in different patients is not the same, the phases last from 3 to 6 months. The rate of bipolar affective psychosis in the population ranges within 0.07-7 %, depressive forms with a monopolar course being prevalent. Females fall ill 3-4 times more frequently than males, but the bipolar course of the disease prevails in males. Bipolar affective psychosis oftener begins at a mature

age of 35-40 years, the onset of the bipolar disorder being somewhat earlier (20-30 years).

Clinically, manic-depressive psychosis manifests itself by affective, effector-volitional disturbances (which at maniac and depressive phases are of the opposite character) and those of understanding, as well as by somatoautonomic symptoms demonstrating, as V.P. Protopopov showed, a higher tonus of the sympathetic autonomic nervous system (Protopopov's triad: spastic colitis, mydriasis, tachycardia).

The maniac phase (F30) manifests itself by three clinical signs: a) a disturbance in the emotional sphere: an increase of the vital emotion of joy (euphoria); b) a disturbance in the intellectual activity: an acceleration of the rate of associations, in severe cases reaching to "galloping ideas"; c) effector-volitional disturbances: a general increase of purposeful activity with a reduced concentration and a higher attractiveness of attention.

Clinically, maniac states manifest themselves by a higher, cheerful mood, which as a rule is displayed without any external apparent cause. The positive emotions of joy, happiness, general well-being are augmented, i.e. euphoria develops. The patients' environment is perceived by them through a prism of positive emotions. The patient sees it in attractive, delightful, charming colours, "as if through rose-coloured spectacles". Reactive emotions are not deep and unstable. The spirits remain high even when the patient receives some bad news or has misfortunes. The patient believes that everybody treats him well; he is pleasant and interesting for everybody. He is sociable, talkative, easily strikes up new acquaintances, visits his friends and relatives, and continuously amuses himself. The rate of his thinking is accelerated. The patient would talk much without a stop, sing songs. In severe maniac states the rate of thinking reaches to "galloping ideas". The speech is usually accompanied by active expressive mimics and gestures. The patients would overestimate their abilities and capacities, sometimes saying delusion-like ideas of grandeur, invention, one's own superiority and exclusiveness.

The patients constantly demonstrate an urge to act (psychomotor excitement). Their attention is not stable, they are extremely distractible. Showing a higher interest in activities, they would undertake to do some work, drop it, being rapidly distracted and always in a hurry somewhere. Instincts in the patients at the maniac state are augmented. A higher erotism manifests itself by coquetry increase, mannered smart clothes and decorations, love-letters and search for amorous adventures. Augmentation of the food instinct manifests itself by voracity. The patients would much and irregularly eat, but do not gain any weight. Very typical for the patients is their indefatigability: being all the time in movements and actions, they do not display any

signs of tiredness and weariness in spite of insufficient sleep for weeks and months. Such patients would sleep 2-3 hours a day. As a result of high spirits, reduced criticism and psychomotor excitement, the patient often gives hollow promises, undertakes higher engagements, lightly appropriates somebody else's property, commits embezzlements in order to satisfy his needs and implement "far-reaching plans", establishes irregular sexual relations. Criticism to their state is absent; the patients do not regard themselves as ill and refuse treatment.

Disturbances of perception are not deep and manifest themselves in the form of visual and auditory illusions, pareidoliae and metamorphopsiae (a symptom of "false recognition"). Memory becomes extremely retentive (hypermnnesia), the patients recollect the pettiest details from their personal and social life, the books they have read and the films they have seen. The maniac phase of bipolar affective psychosis lasts 3-4 months.

At the maniac phase of bipolar affective psychosis, somatic and autonomic disturbances are observed; they are caused by a higher tonus of the sympathetic section of the autonomic nervous system (Protopopov's triad): tachycardia, higher blood pressure, loss of weight, a disturbance of menstrual cycle in women, insomnia. The patients do not make any complaints about their health, feeling cheerfulness and great strength. By the degree of expression of psychopathological symptoms the following mania are distinguished: mild maniac states (hypomania), mania without psychotic symptoms, mania with psychotic symptoms.

Hypomania (F 30.0) is a mild degree of maniac state characterized by slightly high spirits, increased energy and activity of the patient, a feeling of full well-being, physical and mental productivity. The above peculiarities are observed not less than several days.

Mania without psychotic symptoms (F 30.1) is characterized by markedly high spirits, a significant increase of activity with a resultant violation of occupational activity and relations with other people; this state requires hospitalization. An attack lasts not less than one week.

Mania with psychotic symptoms (F 30.2) is accompanied by delusions of overestimation, grandeur and persecution, hallucinations, galloping ideas, psychomotor excitement. An attack lasts at least two weeks.

The depressive phase (F32) of manic-depressive psychosis manifests itself by a triad of disorders:

a) a sharp strengthening of negative vital emotions (melancholia, grief, sometimes with a shade of fear, anxiety);

b) a slower rate of thinking, its scanty contents, up to monoideism, development of delusions of being sinful and self-condemnation;

c) a sharp oppression of the effector-volitional activity, a deep inhibition (up to stupor), riveted attention.

The central place in the clinical picture of the depressive phase is taken by a vital affect of melancholia, grief, sorrow. A morbid depression is particularly augmented in the morning up to melancholia with despondency. The patients would complain of poignant melancholia with squeezing pains in the heart region, substernal heaviness, “precardiac melancholia”. It is impossible to distract the patient from this state and cheer up, under the influence of positive external stimulants the mood remains as it was before. The patients are inhibited (up to depressive stupor), not mobile and spend all the time in similar mournful postures. They would answer questions with a low monotonous voice, showing no interest in talks, express ideas of self-humiliation, self-condemnation, being sinful, in severe cases these ideas become delusions. They regard themselves as criminals, wretched and useless people, some “worthless stuff for the society and family”, a source of various evils and troubles for other people nearby. The patients interpret their previous behaviour in a delirious way, assigning themselves the most negative part. It is not in rare cases that the patients refuse to sit at a common table, to shake their interlocutor’s hand, to lie in bed, motivating it by the fact that they are not worth of it. As a rule, suicidal thoughts and attempts to realize them are observed. The patients do not make any plans for future as they do not see any prospects in it, they do not express any wishes but to die, but the latter may be concealed and dissimulated. The patients’ attention is concentrated on their own feelings, external stimulants do not cause any adequate responses. The instincts are suppressed (anorexia up to absolute rejection to eat, reduced libido, attempts of self-injuring and suicide). The patients do not feel the taste of their food, satiation, feeling of and saturation with sleep. Against a background of an increased depression and despair they may develop psychomotor excitement with suicidal attempts, a “melancholic explosion”. The patient would hit his head against a wall, scratch his face, bite his arms, etc. Suicidal attempts may be both impulsive at the moment of a melancholic explosion and more purposeful with preparation for a suicide. Sometimes the patients commit an “expanded suicide”, killing their children, old parents, and then themselves. Such actions result from delusions of having no prospects in the patient’s existence and of torments threatening his relatives for his own sins. Suicidal tendencies are more frequently realized at a

period of reduced motor inhibition and constraint with preservation of melancholic feelings. Depressive patients need constant observation and control over their actions.

Along with augmentation of negative emotions there may be a loss of feelings when the patients say that they do not feel typical human emotions, they have become impassive automatons, insensitive to their relatives' feelings, and therefore poignantly suffer from their own hard-heartedness, a symptom of "morbid mental anaesthesia" (*anaesthesia psychical dolorosa*); cenesthopathies and illusions are common. Depression is often characterized by such a symptom as distorted perception of time and space, as well as psychosensory disorders with resultant feelings of depersonalization and derealization.

Like in the maniac phase, the somatoautonomic symptoms are caused by a higher tonus of the sympathetic nervous system: a loss of weight, persistent insomnia, the sleep does not refresh and in the morning the patients feel much worse than in the evening, the blood pressure is increased, lacrimation is difficult, the patients would not weep (grief, melancholia with "dry" eyes), they reveal dryness and bitter taste in the mouth, amenorrhoea in women.

Typically observed is **Protopopov's triad**:

- mydriasis,**
- tachycardia,**
- spastic colitis.**

The depressive phase often lasts more than 6-8 months. Depressive states occur 6-8 times more frequently than maniac ones. By the degree of their symptom expressiveness, mild, moderate and severe depressions with nonpsychotic and psychotic symptoms are isolated.

Mild depressive episode (F 32.0) is characterized by low spirits during the larger part of the day, a reduced interest in the surroundings and a feeling of satisfaction, a higher fatiguability, tearfulness. The patients regard their state as a morbid one, but take medical advice not in all the cases. Mild depressive episode occurs in two variants: a) without any somatic symptoms (F32.00); b) with somatic symptoms (F32.01). The somatic symptoms are as follows:

- 1) insomnia, wakening up 2 and more hours earlier than usual, or sleepiness;
- 2) fatiguability, a loss of strength;
- 3) a better or worse appetite, a loss of body weight or its increase without any relation to a diet;

4) a reduced libido;

5) constipations, dryness in the mouth;

6) headache and pains in different areas of the body;

7) complaints about the functioning of the cardiovascular, gastrointestinal, urogenital and locomotor systems.

Moderate depressive episode (F32.1) manifests itself by more expressed depressive symptoms.

Severe depressive episode without any psychotic symptoms (F32.2) is characterized by an absolute violation of vital activity resulting from a severe depressive state, abrupt low spirits with a feeling of vital melancholia and a tint of some physical suffering (precardiac melancholia, expressed psychomotor inhibition). The patients would express ideas of being sinful, have suicidal thoughts and commit suicidal acts.

In *severe depressive episode with psychotic symptoms F32.3*, there are signs of severe depression whose structure includes delusions of being sinful, reference, persecution, as well as hypochondriacal ones. Auditory, visual, tactile and olfactory hallucinations may be observed. The patient would hear funeral singing, feel a putrid smell of his “decomposing body”.

Depending upon the prevalence of some or other symptoms in the clinical picture of depression, the following variants of the latter are isolated: anxious-agitated, hypochondriacal, masked. Along with melancholia, the clinical picture of anxious-agitated depression includes anxious excitement. The patients would rush about, moan, hit their head, wring their hands, fret. In such states they would often commit suicidal acts, as their motor anxiety facilitates realization of suicidal intentions.

Hypochondriacal depression is characterized by numerous unpleasant sensations in different parts of the body. They do not have any definite localization and are not comparable with painful sensations in organic sufferings. The patients would feel some pressing, boring, arching pain. It seems to them that their nerves have swollen, the intestines have dried up, the stomach is reducing in size, the liver has been corroded. The patients' complaints are peculiar, diffuse and cannot be grouped within the framework of some concrete somatic diseases. But unpleasant sensations are not hallucinations by their nature. They are not interpreted in a delirious way like in schizophrenics.

In masked depression, expression of the emotional component is insignificant, while motor, autonomic and sensitive disturbances prevail as depression equivalents.

The patients would complain of general malaise, a loss of appetite, pains in the spinal column, stomach and intestines, insomnia and a reduced capacity for work. The pains are tormenting, and it makes the patients take medical advice. The “**masks**” may be in the form of pathocharacterological disorders (dipsomania, use of narcotics), asocial behaviour (impulsiveness, easy coming into conflicts, outbursts of aggression), hysterical reactions.

Diagnosing “latent depressions” it is necessary to take into account their following signs:

1. Presence of subdepressive states which are especially expressed in the morning.
2. Polymorphism, vagueness, abundance of persistent somatoautonomic complaints which cannot be grouped within the limits of some particular disease.
3. Disruption of vital functions (sleep, appetite, menses, potency, loss of weight).
4. Periodicity of the disorders, spontaneousness in their appearance.
5. Their seasonal character, mostly in spring and autumn.
6. Application of different methods of examination does not reveal any definite somatic disease.
7. Somatic therapy does not produce any effect.
8. The patient would be treated for a long period of time, persistently and without any result by doctors with different specializations, and despite failures would persist in visiting the doctors.

Along with typical maniacal and depressive attacks in bipolar affective psychosis, mixed states can be observed too and are characterized by coexistence of maniacal and depressive symptoms during an attack of the illness in the same patient. Several types of mixed states are isolated:

- a) depression with motor excitement and intellectual inhibition;
- b) maniacal stupor with motor inhibition;
- c) nonproductive mania: high spirits are combined with reduced psychic activity.

Mixed states can be separate phases of the illness, but more frequently are observed as a short-term episode between two opposite phases, during a transition from one of them to another.

Mild forms of bipolar affective psychosis are described under the name of cyclothymia F34.0 and most often pass in the form of slightly expressed depressions with a relatively short-term course.

The variants of uniphasic affective psychosis in the form of sullen-irritable mood, which gradually develops, lasts about one year and gradually passes away, are termed dysthymia F34.1.

Age-specific peculiarities of bipolar affective psychosis. Children of the preschool age do not reveal any clinically definite manic endogenous or depressive phases, therefore they are partially assessed by the relatives and doctors in an inadequate way. Leading for children are somatic and autonomic symptoms. Thus, in depressions children reveal disturbances of sleep and appetite, listlessness, sluggishness, capriciousness, lost of interest in toys. Younger pupils study worse and develop inhibition. The child becomes shy and sullen, he looks pale and tired. No somatic pathology is revealed. Manic states manifest themselves by excessive activity and behavioural disorders. The child is garrulous, constantly laughs, his face is hyperaemic, the eyes sparkle. Manic states are more noticeable than depressive ones.

In teenagers, clinical manifestations of the disease acquire its typical signs, but along with the feeling of melancholia, sadness and depression adolescents develop a sullen dysphoric mood, conflict relations with their relatives and people of the same age, thoughts about their own inferiority, suicidal acts. It is not in rare cases that manic states in adolescents are expressed through psychopathy-like forms of behaviour: violations of school discipline, alcoholization, offences, aggression. These disorders mask the phase of bipolar affective psychosis.

The involutional age is characterized by prevalence of anxious-agitated or hypochondriacal depressions with a protracted course. Manic states occur less frequently and are notable for complacency, fussiness and unproductiveness.

The course of bipolar affective psychosis may be various. Sometimes there is a regular alternation of the manic and depressive phases separated by light gaps without any morbid symptoms (the bipolar course). In other cases one phase turns into the other one, and the latter is followed by a light gap. At last, instead of the consecutive alternation of the phases, any of them may be repeated after a light gap (the monopolar recurrent course). The prognosis in each particular attack is favourable, no changes in the personality take place and the patient returns to his previous labour.

Bipolar affective psychosis should be differentiated from the schizoaffective form of schizophrenia. Unlike manic-depressive psychosis, schizophrenia is typically

characterized by paralogic and splitting thinking, autism, emotional impoverishment, personality changes after the return from psychosis.

In somatogenic, infectious and organic psychoses the patients are asthenic, easily get impoverished, often have syndromes of disturbances of consciousness and intellectual-mnemonic disorders. Unlike endogenous depression, reactive one develops after psychotraumatizing factors, they find their reflection in the patients' sufferings. Endogenous depression is often seasonal, during its attacks there are daily fluctuations in the mood (the depression is more expressed in the morning hours, by the evening the mood becomes better). Presence of the seasonal character in its appearance, daily fluctuations, symptoms of sympathicotonia (Protopopov's triad), absence of any personality changes even after numerous attacks of the illness testify in favour of manic-depressive psychosis.

Etiology and pathogenesis. A bipolar affective psychosis belongs to diseases of unclear etiology, where hereditary aggravation is a predisposing factor. Thus, in case of one parent having the bipolar form of the disease, the child's risk to fall ill is 27 %, with two ill parents the risk of developing affective disorders in their children increases up to 50-70 %.

V.P. Protopopov and his disciples' works are devoted to the study of the pathogenesis of bipolar affective psychosis. Protopopov V.P. attributed the mechanisms of the disease development to some pathology in the thalamohypothalamic areas of the diencephalon, where the central autonomic apparatus playing an important part in manifestations of affective life is located. He believed that the most typical for bipolar affective psychosis is a complex of symptoms united under the name of the sympathicotonic syndrome: tachycardia, dilatation of the pupils, spastic constipations, a loss of weight, dryness of the skin, an increase of blood pressure, a high level of sugar level in blood. He related all these changes to the central mechanisms and put down to a higher excitability of the hypothalamic region.

A significant part in the pathogenesis of bipolar affective psychosis is played by synaptic transmission disturbances in the system of neurons of the hypothalamus and other basal areas of the brain caused by a change in the neuromediated activity (noradrenaline, serotonin). Thus, the catecholamine hypothesis proceeds from the fact, that depression is connected with a functional deficit of one or several catecholamine neurotransmitters on certain synapses, while mania is connected with the functional abundance of these amines.

On the whole, the ***prognosis*** in a bipolar affective psychosis belongs is favourable. But in cases of a long-term course with phases having some psychotic

symptoms, difficulties of the social character develop and the prognosis becomes worse. Assessing the prognosis, one should take into consideration the age of the illness onset and clinical manifestations of the first phase. Recovery is hardly probable with the bipolar type of the illness. If monopolar depressions begin early, the rate of phases at an old age reduces. With an early onset of monopolar mania, an absolute recovery may take place at the age of 50-60. With respect to the general course of bipolar affective psychosis, it is impossible to make any absolutely reliable predictions for every case. Patients suffering bipolar affective psychosis often develop somatic diseases, such as hypertensive disease and diabetes, which worsen the prognosis too.

Treatment and prophylaxis. A bipolar affective psychosis is treated using biological therapy combined with psychotherapy and social therapy. As a rule, the treatment should be provided under inpatient conditions in view of suicidal tendencies of depressive patients or inadequate behavior of maniac ones. Prior to his admittance to mental hospital, it is necessary to provide the patient, his relatives or other people with continuous care and supervision. They should be explained a possibility of attempting suicide.

Antidepressants

Antidepressants are the treatment of choice for a vast majority of depressive episodes. Some of the commonly used antidepressants with their usual range of therapeutic dosage:

Generic Name	Usual Therapeutic Range (mg/day)
Agomelatin	25-50
Amitriptyline	75-300
Amoxapine	150-300

Bupropion	150-450
Citalopram	10-40
Clomipramine	75-250
Doxepine	75-300
Dosulepin/Dotheipin	75-150
Duloxetine	30-120
Escitalopram	10-20
Fluoxetine	20-60
Fluvoxamine	50-200
Imipramine	75-300
Lofepramine	140-210
Mianserin	30-120

Mirtazapine	15-45
Moclobemide	300-600
Nortriptyline	150-300
Paroxetine	10-40
Reboxetine	10-1
Sertraline	50-200
Tianeptin	37.5
Trazodone	300-600
Venlafaxine	75-375

An individualised choice has to be made in each patient, keeping these various factors in mind.

It should be remembered that it may take up to 3 weeks before any appreciable response may be noticed. Before stopping or changing a drug, the particular drug should be given in a therapeutically adequate dose for at least 6 weeks.

For the first, uncomplicated, depressive episode, the patient should receive full therapeutic dose of the chosen antidepressant for a period of 6-9 months, after achieving

full remission. It is wise to taper the antidepressant medication, when the treatment is to be stopped after the continuation phase.

Electroconvulsive Therapy (ECT)

The indications for ECT in depression include:

1. Severe depression with suicidal risk.
2. Severe depression with stupor, severe psychomotor retardation, or somatic syndrome.
3. Severe treatment refractory depression.
4. Delusional depression (psychotic features).
5. Presence of significant antidepressant side effects or intolerance to drugs.

Severe depression with suicidal risk is the first and foremost indication for use of ECT. The prompt use of ECT can be life-saving in such a situation.

The response is usually rapid, resulting in a marked improvement. In most clinical situations, usually 6-8 ECTs are needed, given three times a week. When six ECTs are administered, the usual pattern is three ECTs in the first week, two in the second week and one in the third week.

However, improvement is not sustained after stopping the ECTs. Therefore, antidepressants are often needed along with ECTs, in order to maintain the improvement achieved. The safety of the ECT procedure has now been well-established.

ECT can also be used for acute manic excitement, if it is not adequately responding to anti psychotics and mood stabilizers.

Lithium (Li)

Lithium has traditionally been the drug of choice for the treatment of manic episode (acute phase) as well as for prevention of further episodes in bipolar mood disorder. It has also been used in treatment of depression with less success.

There is usually a 1-2 week lag period before any appreciable response is observed. So, for treatment of acute manic episode, antipsychotics are usually administered along with lithium, in order to provide cover for the first few weeks.

The usual therapeutic dose range is 900-1500 mg of lithium carbonate per day. Lithium treatment needs to be closely monitored by repeated blood levels, as the difference between the therapeutic and lethal blood levels is not very wide (narrow therapeutic index).

Therapeutic blood lithium = 0.8-1.2 mEq/L

Prophylactic blood lithium = 0.6-1.2 mEq/L

A blood lithium level of >2.0 mEq/L is often associated with toxicity, while a level of more than 2.5-3.0 mEq/L may be lethal.

Although lithium is indicated for therapeutic use in all manic episodes, the preventive use is best in usually those patients with bipolar disorder, in whom the frequency of episodes is 1-3 per year or 2-5 per two years.

The common acute toxic symptoms of lithium are neurological while the common chronic side-effects are nephrological and endocrinal (usually hypothyroidism).

The important investigations before starting lithium therapy include a complete general physical examination, full blood counts, ECG, urine routine examination (with/without 24 hour urine volume), renal function tests and thyroid function tests.

Antipsychotics

Antipsychotics are an important adjunct in the treatment of mood disorder. The commonly used drugs include risperidone, olanzapine, quetiapine, haloperidol, and aripiprazole. It is customary to use the atypical antipsychotics first, before considering the older typical antipsychotics.

Some of the indications include:

1. Acute manic episode

- Along with mood stabilisers for the first few weeks, before the effect of mood stabilisers becomes apparent.
- Where mood stabilisers are not effective, not indicated, or have significant side-effects.
- Given parenterally (IM or IV) for emergency treatment of mania.
- Recently, there has been some early evidence that atypical antipsychotics (e.g. olanzapine) might have some mood stabilising properties.

2. Delusional depression

As stated above, antipsychotics are important adjuncts in the treatment of delusional depression. Once again, it is customary to use atypical antipsychotics such as olanzapine, quetiapine, risperidone, and ziprasidone first, although any antipsychotic can be used.

3. Bipolar depression

There is recent evidence that quetiapine has antidepressant efficacy in bipolar depression.

4. Maintenance or prophylactic treatment in bipolar disorder

Recent evidence shows that several atypical antipsychotics such as olanzapine, quetiapine and aripiprazole can be successfully used in the maintenance treatment of bipolar disorder.

Other Mood Stabilisers

The other mood stabilisers which are used in the treatment of bipolar mood disorders include:

1. Sodium valproate

- For acute treatment of mania and prevention of bipolar mood disorder.
- Particularly useful in those patients who are refractory to lithium.
- The dose range is usually 1000-3000 mg/day (the therapeutic blood levels are 50-125 mg/ml).
- It has a faster onset of action than lithium, therefore, it can be used in acute treatment of mania effectively.

2. Carbamazepine and Oxcarbazepine

- For acute treatment of mania and prevention of bipolar mood disorder.
- Particularly useful in those patients who are refractory to lithium and valproate.
- Particularly effective when EEG is abnormal (although this is not necessary for the use of carbamazepine).
- The dose range of carbamazepine is 600-1600 mg/ day (the therapeutic blood levels are 4-12 mg/ml).
- The use of carbamazepine in treatment of bipolar disorder has recently declined, partly due to its potential for drug interactions.
- Oxcarbazepine has a narrow evidence base and its use in bipolar disorder is quite recent.

3. Benzodiazepines

Lorazepam (IV and orally) and clonazepam are used for the treatment of manic episode alone rarely; however, they have been used more often as adjuvants to antipsychotics.

4. Lamotrigine is particularly effective for bipolar depression and is recommended by several guidelines.

5. T3 and T4 as adjuncts for the treatment of rapid cycling mood disorder and resistant depression.

Other Treatments

Psychosurgery is an extremely rarely used method of treatment and is resorted to only in exceptional circumstances.

In depressive episode, which is either chronic or persistently recurrent with a limited or absent response to other modes of treatment, one of the following procedures may very rarely be performed:

1. Stereotactic subcaudate tractotomy, or
2. Stereotactic limbic leucotomy.

In carefully selected patients, the results are reported to be satisfactory. However, in the current day and age, psychosurgery is hardly ever considered in routine clinical practice.

Prophylaxis of relapses. Preventive therapy with lithium salts is effective for maniac attacks, and rarer for depressive ones. It begins with small doses of 300-600 mg/day, increasing them up to 900-1200 mg/day. Lithium concentration in blood should be 0.6-0.8 mM/l. Application of tricyclic antidepressants for supportive therapy and prevention is more expedient in monopolar depressions. In recent years with prophylactic purposes some anticonvulsants have been used: Finlepsin (carbamazepine), Depakine, Convuleks. An important part in preventing the illness is played by psychotherapy (supportive, cognitive, interpersonal, group ones), sanitary-educational work, genetic consulting, a healthy way of life.

INFANTILE AUTISM. CLINICAL MANIFESTATIONS. TREATMENT AND REHABILITATION OF PATIENTS.

Infantile autism

The children, incapable of any speech and affective contacts with their associates, were first described in 1943 by an American psychiatrist Kanner; later the syndrome of an early infantile autism was termed as Kanner's syndrome.

Autistic disorder is the most extensively studied and best understood of the ASDs. "Autistic disorder" is the descriptor used in the DSM, but, in practice, the terms, "autism," "childhood autism," "infantile autism," and "early infantile autism" are used synonymously. The condition is characterized by marked and sustained impairment in social interaction, communication, and restricted or stereotyped patterns of behaviors and interest evident by 3 years of age.



Leo Kanner — was an Austrian-American psychiatrist and physician known for his work related to autism. In 1943, Kanner published a landmark paper, "Autistic Disturbances of Affective Contact" describing 11 children who were highly intelligent but displayed "a powerful desire for aloneness" and "an obsessive insistence on persistent sameness".[1] He later names their condition "early infantile autism."

Hans Asperger was an Austrian pediatrician, medical theorist, and medical professor. He is best known for his early studies on mental disorders, especially in children. His work was largely



unnoticed during his lifetime except for a few accolades in Vienna, and his studies on psychological disorders only acquired world renown posthumously. He wrote over 300 publications, mostly concerning a condition he termed autistic psychopathy (AP). There was a resurgence of interest in his work beginning in the 1980s, and due to his earlier work on autism spectrum disorders, Asperger syndrome (AS), was named after him. Both Asperger's original paediatric diagnosis of AP and the eponymous diagnosis of AS that was named after him several decades later have been controversial.



Donald Triplett, the first person with a diagnosis of "autism"

In ICD-10, infantile autism belongs to section “General developmental disorders”, F84. This is a disorder in psychic development, characterized by an autistic form of contacts with the associates, speech and motility disturbances, stereotyped activity and behaviour with a resultant violation of social interactions. The morbidity rate of infantile autism is 4-5 cases per 10,000 children, in boys it being 3-4 times more common than in girls.

Etiology and Pathogenesis

There is no generally accepted theory of the etiology and pathogenesis of infantile autism. There is more reliable evidence in favor of the theory of psychogenesis and the biological one. According to the theory of psychogenesis, children with early autism did not receive any motherly warmth, care and positive emotional atmosphere.

Although Henry Maudsley, in the late 1800s, was the first **psychiatrist** to focus on very young children with mental disorders, it was the psychiatrist Leo Kanner who coined the phrase “early infantile autism” in 1943. Kanner believed that the parents of children with autistic behaviors were emotionally cold and intellectually distant. He coined the term “refrigerator parents” to describe them. His belief that parental personality and behavior played a powerful role in the development of autistic behaviors left a devastating legacy of guilt and self-blame among parents of autistic children that continues to this day. Recent studies are unequivocal, however, in demonstrating that parents of autistic children are no different from parents of healthy children in their personalities or parenting behaviors. In fact, many families with an autistic child also have one or more perfectly healthy children. Because autistic children can be extremely sensitive to change, any change within the family situation can be potentially traumatic to the autistic child. A move, divorce, birth of a sibling or other stressors that occur in the lives of most families may evoke a more extremereaction from an autistic child.

Biological theories attribute this illness to biological factors, an affected development of the brain, chromosomal abnormalities, an organic lesion of the CNS.

The following data serve in favour of a specific role of genetic factors: the concordance in monozygotic twins is 36 %, the morbidity rate of infantile autism among siblings is 50 times higher than in the general population.

While there is no single neurological abnormality found in children with autistic disorders, some research using noninvasive **brain** imaging techniques such as **magnetic resonance imaging** (MRI) suggests that certain areas of the brain may be involved. Several of the brain areas being researched are known to control emotion and the expression of emotion. These areas include the temporal lobe (large lobe of each side of the brain that contains a sensory area associated with hearing), the limbic system, the cerebellum, the frontal lobe, the amygdala, and the brain stem, which regulates homeostasis (body temperature and heart rate). Recent research has focused particularly on the temporal lobe because of the finding that previously healthy people who sustain temporal lobe damage may develop autistic-like symptoms. In animal research, when the temporal lobe is damaged, social behavior declines, and restless, repetitive motor behaviors are common. When measured by MRI, total brain volume appears to be greater for those with autistic disorders. Other neurological factors include lesions to the brain, congenital rubella, undiagnosed and untreated phenylketonuria (PKU), tuberous sclerosis, and **Rett's disorder** (a related condition in which the baby develops in an apparently normal manner through age five months, and then begins to lose communicative and social interaction skills). There is also evidence of a higher proportion of perinatal complications (complications arising around the time of giving birth) among children with autistic symptoms. These complications include maternal bleeding after the first trimester and meconium in the amniotic fluid. (Meconium is a substance that accumulates in the bowel of the developing fetus and is discharged shortly after birth.) Some evidence suggests that the use of medications during pregnancy may be related to the development of autistic symptoms. As newborns, children with autistic behaviors show a higher rate of respiratory illness and anemia than healthy children.

Some professionals believe that autistic disorders may be caused by allergies to particular fungi, viral infections, and various foods. No controlled studies have supported these beliefs, but some parents and professionals report improvement when allergens and/or certain foods are eliminated from the diet. Viral infections of the mother, such as rubella, or of the young child, such as encephalitis, mumps, and measles, occasionally appear to cause autistic disorders. The common childhood immunization series known as MMR (measles, mumps, rubella) has recently come under scrutiny as a possible cause of some autistic conditions.

The onset of the illness occurs before the age of 3 years. In infantile autism, the development of all psychic functions (cognitive, affective, motor, sensory, attention, memory, speech, thinking) is involved.

Classification specifies three diagnostic categories, each with four components, that are used to make a **diagnosis** of autistic disorder. These diagnostic categories include impairments in social interaction, communication, and particular patterns of behavior. More information about the individual diagnostic categories and components follows.

SOCIAL INTERACTION. Qualitative impairment in social interaction, as demonstrated by at least two of the

following:

- impairment in the use of nonverbal behaviors such as eye contact, facial expression, body posture, and gestures used for social interaction

- failure to develop age-appropriate peer relationships

- lack of attempts to share pleasure, activities, or interests with other people (by

failing to bring items of interest to a parent, or

pointing out animals or objects, for example)

- inability to respond to social situations or other people's emotions with empathy or a concerned attitude

COMMUNICATION. Qualitative impairments in communicating in at least one of the following four areas:

- lack of, or delay in development of spoken language, without attempts to communicate through alternative

means such as gestures or mime

- in individuals who do speak, severe impairment in the ability to initiate or sustain a conversation with others



Fixations of an adult with autism (black line) and a typical viewer (white line) while viewing a conversation on film. (Source: Reprinted, with permission from the American Journal of Psychiatry 159, 909-916. © APA.)

- repetitive and stereotyped use of language, or use of words in unusual, idiosyncratic ways
- failure to show imaginative play, such as make-believe or social imitative play appropriate to developmental level

BEHAVIOR. Restricted, repetitive, and stereotyped patterns of behavior, interests, and activities, as demonstrated

by at least one of the following:

- unusual and overly absorbing preoccupation with one or more interests or activities
- a need for rigid adherence to specific routines or rituals in daily life
- stereotyped and repetitive motor behaviors using parts of the body such as fingers or hands, or the whole body
- persistent preoccupation with parts of objects

A behavioural disorder is the main one in infantile autism. The child avoids contacts with children of his age, elder people and relatives. He shuts himself off from the real world, is not able to distinguish animate and inanimate objects. His personal contacts with the parents is devoid of any emotional colour, he does not imitate his associates' behaviour. The children are not afraid to remain by themselves, they would not follow their parents when they begin to walk. Emotional reactions in such children are different: in some of them the mood is even, others are listless, some others are indifferent, rather often dysphoric reactions occur. The children would negatively react to any attempts to change their habitual life stereotype: to change their clothes, food, place of the walk.

The game activity of such children often comes to some monotonous turning over of objects. They either stick to the same games for long periods of time or are rapidly satiated with them. Instead of playing, they would crawl, walk, jump up, sometimes displaying a particular interest to some objects (pieces of iron, toy lorries and cars, ribbons, etc.). The children make monotonous movements: they would swing, jump, repeat the same sounds, show liking for the same objects, manipulations or passions. Their motility is awkward, with rather frequent athetosis-like movements in fingers and tiptoeing. But at the same time, development of complex and fine movements is possible. Outwardly, the children look estranged, their eyes are as if directed to emptiness, they do not look their associates in the face. The speech of patients with

infantile autism is poorly developed, first of all its communicative function, rather often they would not talk at all.

About 50 % of the patients remain mute for the whole life. If, nevertheless, the speech develops, it is not used for personal contacts. The child may recite the same verses, but would not seek the parents' help even when it is necessary. There is no expression and uninterrupted rhythm of the speech, gesticulation. The words are pronounced either correctly or indistinctly, either in a whisper or loudly. Echolalia are common. Personal pronouns are not used for long periods of time. The first words appear by the age of 12-18 months, the first phrases by 24-36 months. But the children would not ask questions and may not reply to any talk addressed to them. Even having a good vocabulary, the children would utter stock phrases, expressing their requests with impersonal orders, such as "to give food", "to cover". The speech has a lot of neologisms. The children are not capable of having dialogues; they would speak to somebody, but not with him.

Children with early autism develop abstract forms of cognition, but they are combined with primitive forms and using of chiefly tactile, olfactory and taste analysers. Reactions to visual and auditory stimulants in infants may be absent, it giving a ground for suspecting deafness and blindness in them.

The clinical picture of infantile autism reaches to its most expressed development by the age of 3-5 years, with a particular combination of complex and primitive reactions in each functional system. By 5-6 years, some manifestations of the illness may smooth down. But the intellectual level does not reach to its average level. In half of the children their IQ is below 50, and only in 1/3 it is over 70. Rather often children with the syndrome of autism are treated as oligophrenics or schizophrenics. But the absence of expressed positive symptoms and progradency, a partial compensation by the age of 6 years make it possible to regard Kanner's syndrome as a developmental disorder of the type of asynchronous dysontogenesis. Besides, schizophrenia is characterized by a later onset and hereditary predisposition to it, rather than to autism.

A majority of children with autism display cognitive impairment. It has been estimated that approximately 75–80% of individuals with autism are classified as intellectually disabled, with about 30% falling in the mild to moderate range and 45% in the severe to profound range. Comparable to typical children, IQ scores are relatively stable and predictive of outcome. Current trends toward earlier detection and intervention, along with increased recognition of higher functioning forms of the disorder, are likely to decrease the proportion of individuals with autism with intellectual disability. On measures of cognitive ability, children with autism tend to display deficits in abstract reasoning, verbal concept formation, and integration skills, as

well as tasks involving social insight. In contrast, relative strengths are usually observed in the areas of rote learning and memory skills and visual-spatial problem solving. Individuals with autism display a bias toward perceiving and processing information at the level of local details rather than the global level, or the “big picture”; they have difficulty “seeing the forest for the trees.” This processing bias is reflected in greater success on parts-to-whole tasks, rather than tasks requiring them to process a gestalt. Consistent with the prevalent impairment in language, children with autism also tend to display stronger performance on measures of nonverbal ability relative to verbal ability. A small percentage of individuals with autism, approximately 10%, display savant skills, or specific abilities that dramatically exceed their own broader intellectual ability or the abilities of their typically developing counterparts. These skills may take the form of musical or drawing ability or exceptional feats of memory, such as the ability to name days of the week corresponding to dates several years in. A common isolated strength in children with autism is facility in recoding letters and numbers, or hyperlexia. Children with autism often display disturbances in patterns of sleeping and eating. They may sleep in idiosyncratic patterns with recurrent awakening at night for long periods; among lower functioning individuals, this can present a safety risk as these children are then unsupervised as others in the house remain asleep. Eating disturbances may involve seeking or avoiding particular foods based on texture, color, or smell. Many children with autism resist all but a limited repertoire of foods and refuse to try new foods. Poor affect modulation and displays of emotions inconsistent with contextual events are also seen in autism, including abrupt mood changes and laughing for no apparent reason. Temper tantrums are common, particularly in reaction to demands and unexpected changes in routine. Higher functioning individuals may display intense anxiety in social situations; they may also develop depression in adolescence, resulting from negative social experiences over the years and augmenting insight into their own social limitations.

Patients with autism have a wider range of IQ and reliably lower indices of the comprehension test than those with schizophrenia. In some cases patients may memorize much information, make complex calculations, they preserve musical, mechanical and mathematical abilities.

Becoming adults, 2/3 patients with infantile autism are not able to live independently and have no skills for unaided self-servicing. In mild cases it is possible to achieve some primitive professional adaptation.

Language is usually significantly impaired in individuals with autism. It has historically been estimated that as many as half of individuals with autism never develop functional speech; but this proportion is decreasing due to improved detection

and intervention procedures, along with recognition of high-functioning forms of the disorder. Nevertheless, language impairments represent a core phenotypic feature, with delays in the acquisition of language representing the most frequent presenting complaint. Usual patterns of language acquisition (e.g., playing with sounds and babbling) may be reduced in frequency or altogether absent. Children with autism commonly manipulate a parent's hand (as if the hand were a disembodied tool) instead of making more conventional requests. In contrast to children with language impairment alone, children with autism display an apparent reduced drive to communicate and tend not to compensate through nonverbal means, such as gesture or eye contact. When individuals with autism do develop speech, their language is atypical in several respects. They frequently display immediate or delayed echolalia, or repetition of previously heard speech. Immediate echolalia often takes the form of repeating statements or questions uttered to the child and has been considered the child's attempt to "respond" despite lacking comprehension of the verbiage or the ability to formulate an appropriate response. Immediate echolalia is often observed in typical language development as a tool for acquiring speech; it follows that it is considered a positive predictor for functional language development in children with autism. Delayed echolalia is also common and may manifest as repeating snippets of previous conversations or movie dialog. These utterances may be nonreciprocal and noncommunicative in nature or may be incorporated into functional language. For example, a child might repeat a parent's admonishment aloud every time they become anxious that they have done something wrong or use lines from movie dialog appropriately in real-life situations analogous to the movie scene. The term "stereotyped speech" refers to the application of these rote, scripted speech patterns in this fashion. Because of the rote and inflexible manner in which speech is learned and utilized, children with autism often produced idiosyncratic patterns of speech that are functional but odd. For similar reasons, children with autism often reverse pronouns, commonly referring to themselves in the second person. The syntax and morphology of language are typically intact in individuals with autism who develop speech. However, they have particular difficulty with social uses of language (pragmatics). Thus, humor and sarcasm are often misconstrued as a person with autism may fail to appreciate the speaker's communicative intent and interpret the jest literally. Indeed speech in individuals with autism tends to be excessively concrete, both in terms of production and comprehension. The prosody of individuals with autism is usually inappropriate, with flat intonation and halting pacing, sometimes described as "robotic." Deficits in pragmatic communication, particularly the ability to have a back-and-forth conversation, are prevalent. The language and communicative deficits in autism differ from those characterizing pure language impairments in their focal social difficulties, as well as the severity of language delays.

Asperger's disorder (AD) is currently differentiated from other ASDs by the preservation of linguistic and cognitive abilities despite profound social disability and circumscribed interests. AD is named after an Austrian pediatrician, Hans Asperger. In 1944, at approximately the same time when Leo Kanner described children with "autism" in the United States, Asperger described a group of school-aged boys with intact cognitive and language skills but difficulties with social interaction (Asperger 1944). He called the disorder "autistic personality disorder." Asperger noted poor social integration, reduced nonverbal communication, idiosyncratic verbiage, strong (and often unusual) areas of interest, limited empathy, clumsiness, and behavior problems. Asperger suggested that these difficulties did not emerge before 3 years of age, and he commented on the apparent heritability of the disorder.

Criteria for AD

A. Qualitative impairment in social interaction, as manifested by at least two of the following:

- (1) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction,
- (2) failure to develop peer relationships appropriate to developmental level,
- (3) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing or pointing out objects of interest to other people)
- (4) lack of social or emotional reciprocity

B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following

- (1) delay in or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
- (2) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
- (3) stereotyped and repetitive use of language or idiosyncratic language
- (4) lack of varied spontaneous make-believe play or social imitative play appropriate to developmental level

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning

D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years).

E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

Rett's disorder (RD), also called Rett's syndrome, is a rare genetic neurodevelopmental disorder that almost invariably affects females. The disorder is characterized by a period of normal development, usually the first 6 months of life, followed by deceleration of head growth, social withdrawal, and a generalized slowing of development. A regressive phase follows, during which previously acquired receptive and expressive language skills are lost. During this period, motor skills, specifically purposeful hand skills, also regress and are replaced by characteristic hand stereotypies of hand-wringing and washing motions. This regression may take place insidiously over a prolonged course or more abruptly in the span of several days. Generally around the age of 3, this regression slows, leaving severe mental retardation and neurological deficits, including spasticity, seizures, and trouble coordinating breathing and eating. Improvements in social engagement are often seen during this plateau. During early puberty, there is generally further deterioration in motor function, with progressive scoliosis and muscle wasting. Children with RD often become wheelchair bound.

Criteria of RD

A. All of the following:

- (1) apparently normal prenatal and perinatal development
- (2) apparently normal psychomotor development through the first 5 months after birth
- (3) normal head circumference at birth

B. Onset of all of the following after the period of normal development:

- (1) deceleration of head growth between ages 5 and 48 months

(2) loss of previously acquired purposeful hand skills between ages 5 and 30 months with the subsequent development of stereotyped hand movements (e.g., hand-wringing or hand washing)

(3) loss of social engagement early in the course (although often social interaction develops

later)

(4) appearance of poorly coordinated gait or trunk movements

(5) severely impaired expressive and receptive language development with severe psychomotor retardation

Differential diagnosis of autistic spectrum disorders

Differential diagnosis is the process of distinguishing one disorder from other similar disorders. Because there are currently no medical tests (such as a blood test) to detect autism, the diagnosis is often established by ruling out other disorders.

MENTAL RETARDATION. It is estimated that approximately 40% to 60% of children with autistic disorders show some degree of mental retardation ranging from mild to profound. It is possible for a child to have both conditions. What distinguishes children with mental retardation who do not have autistic symptoms from those who do is evenness of development. Children with mental retardation tend to exhibit a more even level of functioning in all areas, whereas autistic children tend to exhibit extreme variability within areas and between areas. Children with autistic disorders show uneven development in areas such as motor, language, and social skills. A child with autism may have high-level cognitive functioning in one area, but low-level cognitive functioning in another area, for example. Or a child with autism may exhibit delayed cognitive development, but normal motor skills development. For this reason, autism is often referred to as a “spectrum disorder” because of the large spectrum or range of variability in symptoms and functioning. Also, many children with mental retardation relate well to people and enjoy social connection, which is rare for autistic children.

LANGUAGE DISORDER. Children with autistic disorders may appear similar in some ways to children with language disorders. Unlike autistic children, however, children with language disorders have normal responses

CHILDHOOD SCHIZOPHRENIA. Schizophrenia is a disturbance of emotion and thought processes that rarely occurs in young children. When it does, it is characterized by hallucinations and delusions — seeing and hearing things that are not there, for example. These are not symptoms that appear among autistic children.

DEGENERATIVE ORGANIC BRAIN DISORDER. This is an extremely rare condition that may at first appear similar to autistic disorders. In degenerative organic brain disorder, the child begins to develop normally. But over time, speech, language, motor skills and other age-appropriate behaviors disintegrate and do not return. The disintegration is progressive. In children with autistic disorders, some children may begin to develop words and language and then lose them at around eighteen months. However, with appropriate education, these skills can be relearned and surpassed by the autistic child.

The treatment is mainly symptomatic. Autistic disorders cannot be cured, but children who have these disorders can make considerable progress in all areas of life. Much attention is attached to behavior therapy, which stimulates the speech and social development. Neuroleptics, tranquillizers, antidepressants and sedatives are administered for an expressed aggressiveness, autoaggressiveness, hyperactivity and dysphoriae. Very important is psychotherapy, directed at the child himself and his relatives. Depending upon the level of intellectual function, it is possible for some children with autism to become functioning, semi-independent adults capable of working and enjoy some social relationships. Parenting a child with autism can be extremely challenging, however, and many families find support groups to be helpful. Both medication and psychosocial therapies (therapies that address both psychological and social issues) can help ameliorate troubling symptoms. Education is key for helping these children learn socially acceptable behaviors, decreasing odd mannerisms and behaviors, and increasing appropriate verbal and non-verbal language skills.

Education. Most educational programs for children with autistic disorders involve small, specialized classes with teachers specially trained to work with autistic children. Often, these children are educated in special schools that have extended school years rather than lengthy summer vacations. Research has shown that autistic children need regular, daily structure and routine, and they maintain their skills best when there are not frequent disruptions of their daily school program. One method that has been used extensively both within the classroom and at home is a behavior modification method known as “Applied Behavior Analysis,” or ABA. Specially trained teachers break down large goals into small steps that are taught and repeated until the child masters each one. Slowly, step by step, more appropriate patterns of behavior and communication are formed or “shaped” in this way. Positive reinforcement is used in many forms such as praise, for those children who are motivated by it, time permitted to engage in a favorite activity, or a small favored food item. For ABA to be most effective, parents need to be trained to use these same skills to continue the work at home.

Medications Although no one drug is helpful to children with autistic disorders, several medications are currently used, along with education, to reduce severe temper tantrums and destructive aggression, self-injurious behaviors, hyperactivity, and strange, repetitive behaviors. Medications may also help the autistic child become more receptive to learning and relating to others. Some of the medications commonly used today include risperidone (Risperdal), and haloperidol (Haldol). Although there are side effects associated with these medications, careful dosing and use of other medications to counteract side effects often enable the autistic child to function more effectively.

Non-conventional treatments One non-conventional and experimental treatment for autism is the use of secretin, a hormone produced in the small intestine that stimulates the pancreas to release sodium bicarbonate and other digestive enzymes. Some researchers think that children with autistic disorders do not produce enough of this hormone, and that the lack of sufficient secretin may be the reason why children with autistic disorders suffer so frequently from digestive problems. There are some reports of treating autistic children with secretin that indicate improvement not only in digestion, but in eye contact, alertness, and the ability to learn. Another non-conventional, experimental treatment involves *Candida albicans*, the technical term for common yeast that is found in the human body. Some scientists believe that an overgrowth of this yeast may cause or worsen autism. Some reports indicate that children treated with anti-yeast medications improve in eye contact, social abilities, language skills, concentration, and sleep, and that they show a reduction in aggressive and hyperactive behavior. An additional non-conventional treatment being researched for autism is a nutritional supplement, Vitamin B6. Some experts believe that Vitamin B6 holds promise for reducing autistic symptoms and helping autistic children progress in all areas. It may be combined with magnesium and the combination appears to have no known side effects. Improvements attributed to these

HYPERKINETIC DISORDER IN CHILDREN AND TEENS.

TREATMENT AND REHABILITATION OF PATIENTS WITH DISORDERS OF SOCIAL BEHAVIOR.

MEDICAL AND PSYCHOLOGICAL CORRECTION

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) – is a developmental disorder characterized by distractibility, hyperactivity, impulsive behaviors, and the inability to remain focused on tasks or activities.

Antisocial personality disorder – Disorder characterized by behavior pattern of disregard for others' rights. People with this disorder often deceive and manipulate, or their behavior might include aggression to people or animals or property destruction, for example. This disorder has also been called sociopathy or psychopathy.

Conduct disorder – A behavioral and emotional disorder of childhood and adolescence in which children display physical aggression and infringe on or violate the rights of others. Youths diagnosed with conduct disorder may set fires, exhibit cruelty toward animals or other children, sexually assault others, or lie and steal for personal gain.

Nervous tic – A repetitive, involuntary action, such as the twitching of a muscle or repeated blinking.

Oppositional defiant disorder – An emotional and behavioral problem of children and adolescents characterized by defiant, hostile, or disobedient behavior that has lasted for longer than six months.

These are mostly disturbances in the effector-volitional sphere manifesting themselves through expressed motor activity, inattention and reduction of volitional qualities.

Within the last decade these disorders were more and more mentioned by doctors, teachers and social workers, since the social significance of this pathology is very great. The main problem of these children consists in their excessive motor activity which is perceived by the majority of their associates as hooliganism. It is extremely important for paediatricians and specialists in juvenile diseases to professionally assess these deviations and begin medical-corrective measures in time.

Literature data about the morbidity rate of hyperkinetic disorders greatly vary from 1-6 % of children before the age of puberty to 4-12 % of young pupils. The disorder is significantly more common for boys, a lot of them being adopted.

Classification of clinical manifestations. By now, no classification of hyperkinetic disorders has been devised, since their clinical manifestations are of the same type, similar and united into one syndrome by the same pathogenesis. On the whole, the symptoms are characterized by some restless activity, impulsiveness, which sometimes achieves destructive aggressiveness, and absent-mindedness. The onset of a hyperkinetic disorder is during early development. Rather often the mothers of sick children retrospectively notice hypermotility of their fetus. At the age of infancy, such children are restless, hyperdynamic, their sleep is short-time and poor, their threshold of excitement to sensor stimulants is low. Finally, the hyperkinetic disorder syndrome becomes evident by the age of 6-7 years, when the child already has to meet certain demands of behavior stereotypes (to sit till the end of a class, to fulfill a task, to keep silence). Typical for a hyperkinetic disorder are impulsiveness and rashness, but the acts are made unpremeditatedly, the patients are not able to prognosticate final results. The sense of carefulness is absent even in dangerous situations. One of these impulsiveness manifestations is aggressiveness, manifesting itself in 75 % of sick children.

A deficit of attention displays itself through high distractibility, unsteadiness, impatience, inability to finish a task. The children are not able to keep their seat, they would jump up, pay no attention to remarks made by adults, run, jump irrespective of the situation, aggressively investigate their surroundings, easily meet with accidents.

ADHD. The definitions of ADHD and hyperkinetic disorder are based on maladaptive high levels of impulsivity, hyperactivity and inattention. They are all based on observations about how children behave: 'impulsivity' signifies premature and thoughtless actions; 'hyperactivity' a restless and shifting excess of movement; and 'inattention' is a disorganized style preventing sustained effort. All are shown by individual children to different extents, and are influenced by context as well as by the constitution of the person.

Course. One of the diagnostic criteria of a hyperkinetic disorder is its early onset (before the age of 5 years). The symptoms are more evident in pupils, and, unlike in boys, hyperdynamia in girls is less expressed, but anxiety and mood disturbances prevail. Clinical manifestations may disappear in the beginning of the period of puberty.

Onset. The core behaviors of ADHD are typically present from before the age of 7 years, but at all ages presentation as a problem is very variable. Mild forms need not be impairing at all. Extreme forms are considered to be harmful to the individual's development in most cultures, but there are cultural differences in the level of activity and inattention that is regarded as a problem. While both teachers and parents can find it hard to deal with or live with a hyperactive child, their tolerance and ability to cope may determine whether the hyperactivity is presented as a problem. Children with hyper-

activity rarely ask for help themselves. Inattention without hyperactivity often is not present as a problem even though an inattentive child may have a marked cognitive impairment. The presentation to the clinician therefore depends on a complex blend of the skills and tolerance of adults surrounding the child and the qualities of the children themselves. The core problems of ADHD and the associated features can persist over time and impair development in children. Several studies have followed diagnosed schoolchildren over periods of 4 to 14 years; all have found that they tend to show, by comparison with people of the same age who have not had mental health problems, persistence of hyperactivity and inattention, poor school achievement and a higher rate of disruptive behavior disorders. The risk of later maladjustment also affects children not referred to clinics and those not treated at all. Longitudinal population studies have shown that hyperactive-impulsive behavior is a risk for several kinds of adolescent maladjustment. Lack of friends, work and constructive leisure activities are prominent and affect the+ quality of life. Severe levels of hyperactivity and impulsivity also make children more likely to develop an antisocial adjustment and more likely to show personality dysfunction or substance misuse in later adolescence and adult life.

Although ADHD symptoms persist in the majority of cases, it is important to remember that many young people with ADHD will make a good adjustment to adulthood and be free of mental health problems. A good outcome may be more likely when the main problem is inattention rather than hyperactivity-impulsivity, when antisocial conduct does not develop, and when relationships with family members and other children remain warm. More research is needed on the influences on eventual outcome, and should include enquiry about the possible benefits (and risks) of early diagnosis and treatment.

Age-specific peculiarities. In juveniles, the motor disinhibition decreases, but the hyperkinetic disorder is covered with layers of bad behavior and difficulties in studies. Adults are characterized by an asocial mode of life, alcoholization, and abuse of narcotic drugs. Having begun in childhood, hyperkinetic disorders are preserved by the juvenile age in 50 %, and by the adult age in 30 %; they are characterized by an unfavourable course and an antisocial direction of the personality.

Etiology and pathogenesis. Infections and intoxications at the perinatal period and injuries in the young childhood are etiological factors of hyperkinetic disorders. No genetic predisposition to these disorders can be excluded. Their pathogenesis is based on neurocirculatory and neuroendocrine disorders, which result from affecting factors and contribute to abnormal maturation of certain cerebral structures causing their dysregulation.

ICD-10 criteria for hyperkinetic disorders

1. Inattention – At least six symptoms of attention have persisted for at least 6 months, to a degree that is maladaptive and inconsistent with the developmental level of the child:

Often fails to give close attention to details, or makes careless errors in school work, work or other activities

Often fails to sustain attention in tasks or play activities

Often appears not to listen to what is being said to him or her

Often fails to follow through on instructions or to finish school work, chores or duties in the workplace (not because of oppositional behaviour or failure to understand instructions)

Is often impaired in organising tasks and activities

Often avoids or strongly dislikes tasks, such as homework, that require sustained mental effort

Often loses things necessary for certain tasks and activities, such as school assignments, pencils, books, toys or tools

Is often easily distracted by external stimuli

Is often forgetful in the course of daily activities

2. Hyperactivity – At least three symptoms of hyperactivity have persisted for at least 6 months, to a degree that is maladaptive and inconsistent with the developmental level of the child:

Often fidgets with hands or feet or squirms on seat

Often leaves seat in classroom or in other situations in which remaining seated is expected

Often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, only feelings of restlessness may be present)

Is often unduly noisy in playing or has difficulty in engaging quietly in leisure activities

Often exhibits a persistent pattern of excessive motor activity that is not substantially modified by social context or demands

3. Impulsivity – At least one of the following symptoms of impulsivity has persisted for at least 6 months, to a degree that is maladaptive and inconsistent with the developmental level of the child:

Often blurts out answers before questions have been completed

Often fails to wait in lines or a wait turns in games or group situations

Often interrupts or intrudes on others (for example, butts into others' conversations or games)

Often talks excessively without appropriate response to social constraints

4. Onset of the disorder is no later than the age of 7 years.

5. Pervasiveness – The criteria should be met for more than a single situation, for example, the combination of inattention and hyperactivity should be present both at home and at school, or at both school and another setting where children are observed, such as a clinic. (Evidence for cross-situationality will ordinarily require information from more than one source; parental reports about class-room behavior, for instance, are unlikely to be sufficient.)

6. The symptoms in 1 and 3 cause clinically significant distress or impairment in social, academic or occupational functioning

Treatment. The therapy of hyperkinetic disorders should proceed from the principles of the treatment duration, complex character, and individuality, including drug treatment, psychotherapy and social-pedagogical methods. It is possible to use such drugs of choice as psychostimulants, mainly amphetamines: dexamphetamine, Ritalin (methylphenidate), pemoline (Cylert). These medicines improve concentration, reduce motor activity and impulsiveness. Besides, for some cases, antidepressants (melipramine, fluoxetine) and antiparoxysmal drugs (carbamazepine) are indicated, sometimes neuroleptics (Neuleptil, sonapax) are prescribed.

For children who do not respond well to stimulant therapy, and for children who clearly suffer from depression as well as ADHD, tricycles antidepressants (a group of drugs used to treat depression) may be recommended. Examples of these antidepressants include desipramine (Norpramin, Pertofane) and amitriptyline (Elavil). Reported side effects of these drugs include persistent dry mouth, sedation, disorientation, and cardiac arrhythmia (an abnormal heart rate), particularly with desipramine. Other medications prescribed for ADHD therapy include bupropion (Wellbutrin), an antidepressant; fluoxetine (Prozac), an SSRI antidepressant (a group of medications used to treat depression by directing the flow of a neurotransmitter called

serotonin); and carbamazepine (Tegretol, Atretol), an antiseizure drug. Clonidine (Catapres), a medication used to treat high blood pressure, has also been used to control aggression and hyperactivity in some ADHD children, although it should not be used with Ritalin. Because

Psychotherapy should be provided both individually (separately with the child and the parents) and in the family, with use of methods of psychological-pedagogical correction.



A special education teacher helps a student with attention-deficit/hyperactivity disorder with his math assignment. (*Photo Researchers, Inc. Reproduced by permission.*)

GALE ENCYCLOPEDIA OF MENTAL DISORDERS

Behavior modification therapy uses a reward system to reinforce good behavior and task completion and can be implemented both in the classroom and at home. A tangible reward such as a sticker may be given to the child every time he completes a task or behaves in an acceptable manner. A chart may be used to display the stickers and visually illustrate the child's progress. When a certain number of stickers are collected, the child may trade them in for a bigger reward such as a trip to the zoo or a day at the beach. The reward system stays in place until the good behavior becomes ingrained. A variation of this technique, cognitive-behavioral therapy, may work for some children to decrease impulsive behavior by getting the child to recognize the

connection between thoughts and behavior, and to change behavior by changing negative thinking patterns. Individual psychotherapy can help ADHD child build self-esteem, provide a place to discuss worries and anxieties, and help him or her to gain insight into behavior and feelings. Family therapy may also be beneficial in helping family members develop coping skills and in working through feelings of guilt or anger parents may be experiencing. ADHD children perform better within a familiar, consistent, and structured routine with positive reinforcements for good behavior and real consequences for bad behavior. Family, friends, and caretakers should all be educated on the special needs and behaviors of the ADHD child so that they can act consistently. Communication between parents and teachers is especially critical to ensuring an ADHD child has an appropriate learning environment.

Alternative treatment

A number of alternative treatments exist for ADHD. Although there is a lack of controlled studies to prove their efficacy, proponents report that they are successful in controlling symptoms in some ADHD patients. Some of the more popular alternative treatments include:

- EEG (electroencephalograph) biofeedback. By measuring brainwave activity and teaching the ADHD patient which type of brainwave is associated with attention, EEG biofeedback attempts to train patients to generate the desired brainwave activity.
- Limited sugar intake. However, data indicate that this method does not actually reduce symptoms.
- Relaxation training.

PERSONAITY DISORDERS. CLINICAL FORM. REHABILITATION ACTIVITIES

These include persistent character abnormalities manifesting themselves by a dysharmony in the emotional and effector-volitional spheres and mostly affective thinking, all of them hampering and in some cases preventing any social adaptation.

Classification of personality disorders

- I. Character accentuations.
- II. Psychopathies.
- III. Psychogenic pathological development of personality.
- IV. Psychopathization of personality caused by various diseases.

Character accentuations are extreme variants of the norm, when some streaks of the character are extremely intensified with a resultant selective vulnerability to certain kinds of psychogenic effects. Each type of accentuation has only its own “weak place”, and if a psychogenic factor is addressed just to this “weak place”, the accentuated streak of the character may manifest itself as a pathological one with a temporary disorder in the behaviour and adaptation. Character accentuations are a predisposing factor for developing psychogenic disorders and diseases of the general somatic level, to some extent they may produce some effect on the course of a somatic disease, it increasing responsibility of a doctor with any specialization.

The morbidity rate of character accentuations in the general population is rather high. Attention should be paid to differences in these indices as observed by different authors. A.Ye. Lichko (1985) informs that in the juveniles at the age of 14-15 the accentuated make 52 %, while at the age of 16-17 this index is 62 %. Unlike psychopathies, character accentuations are variants of the norm and do not have even one sign of psychopathy.

There may be an evident accentuation, when a certain type of the character is notable for presence of expressed streaks, and a latent one, which under usual conditions does not reveal itself at all or is slightly expressed.

The major contribution to the study of character accentuations was made by a famous Russian scientist A.Ye. Lichko and a German researcher K. Leonhard. They suggested classifications of the accentuation types. Both these classifications have some differences. A.Ye. Lichko classifies character accentuations in the following way.

The hyperthymic type manifests itself by an intensified sociability and a good mood which is harmoniously combined with an excellent general state and a high life tonus. From their childhood such people are very lively, mischievous and more independent than it should be for their age. In their relations with adults and teachers they would not keep the feeling of distance. They are noisy in any collective body, make much fuss, prefer companies of people of their age, pretending to lead them. They stand firm discipline bad. Because of their fidgets and high distractibility they do not achieve much progress in studies. Their attitude to any rules, laws, moral and social directions is light-minded. They are inclined to alcoholization, delinquency, escapes, vagabondage.

The cycloid type may not manifest itself with anything in the childhood, or resemble the hyperthymic type. From the beginning of the period of puberty, most frequently at the age of 16-18, a subdepressive phase develops, which manifests itself by apathy, loss of strength, low spirits. In the emotional background, short temper prevails. Such people would take petty misfortunes and troubles to heart. Usually the phases do not last long, 1-2 weeks, and then change into a period of high mood or a general state. In the period of high mood these people try “to make up for what was lost”, turning into hyperthymic ones. They would long for a company, set up acquaintances, cannot bear loneliness. The periods of high mood are less frequent than subdepressive phases. Usually such people attract attention of psychiatrists when they attempt suicide in the subdepressive phase or because of an affective reaction.

The labile type. These people do not differ from others of the same age in childhood, but are only very sickly. Some of them reveal a disposition to neurotic reactions. The main feature of the labile type consists in an extreme changeability of the mood apropos of almost nothing, accompanied by worsening of the general state and autonomic lability. In their attitude to their relatives they are able to have deep feelings, sincerity and affection. They take any emotional rejection from the part of their acquaintances to heart.

The asthenoneurotic type is a premorbid background for forming neurotic reactions and neuroses. The main features of this type of accentuation are easy fatiguability, shortness of temper, a disposition to hypochondria. The shortness of temper is clearly seen in the process of getting tired and may reach to affective splashes. The self-assessment usually reflects hypochondriacal moods, the central place in plans for future is taken by the care for one’s own health.

The sensitive type. From their childhood, such people are timorous, do not like any noisy games, avoid risky pranks. They feel shyness and bashfulness in personal contacts with strangers. They study with diligence, are afraid of tests and examinations,

rather often even of their answers in class. Two main qualities of this type of accentuation are higher sensitiveness and self-respect; usually they develop at the age of 16-18, when a habitual school stereotype changes into a labour one or a study at another educational establishment and a person has to make new contacts. The feeling of one's own inferiority is often "masked" by the reaction of hypercompensation: the timid and bashful are unduly familiar and arrogant, the diffident try to demonstrate their joviality and sociability, choosing extreme sports for overcoming fear. Such people are not inclined to alcoholization and delinquency; an attitude of their associates to them is their vulnerable place.

The psychoasthenic type does not manifest itself specifically in the childhood and youth. The main features are indecision, a disposition to philosophizing, self-analysis, over-anxiousness about one's health. Annoying fears and apprehensions easily develop and give rise to protective rituals. The physical development of psychasthenic juveniles is not sufficient. All known forms of behaviour disorders are not characteristic of them. Psychasthenic streaks of the character reach to their highest degree at the age of 20-40; neurosis of obsessions easily forms against this background.

The schizoid type. The schizoid streaks of the character are shown from the early childhood, such children would not get attracted by others of their age, they prefer to play alone, avoid noisy collective bodies. They are restrained in manifesting their feelings and it may be perceived as some emotional coldness. At the juvenile age the accentuation is intensified, the juveniles become even more reserved, live in their own world, at the same time suffering from their loneliness and inability to establish contacts. The schizoid streaks of the character do not entail any disturbances in the behaviour, alcoholic and narcotic drives, and do not result in social dysadaptation.

The epileptoid type. The main features of this type of accentuation are explosiveness and a disposition to dysphoria (fits of a melancholic-malicious mood). Stiffness, rigidity, inertness accompany all the psychic processes. As a rule, particular attention is paid to one's own health and well-being. Such people are inclined to demonstrative suicides, rancorous, revengeful and do not forgive any offences.

The hysteroid type. This streak is notable from young years. Such children would not bear when attention is paid to other children. Their essential need is to be in the centre of attention. Their clothes, hair style, make-up, behaviour, talks – everything comes to one purpose. Indifference from the part of their associates is unbearable for hysteroids. They would use falsity and slanders, commit improper and sometimes even asocial acts. At the age of puberty, the streaks of the character become intensified, with possible demonstrative suicidal attempts, escapes from the home, alcoholization and delinquency.

The unstable type. From their childhood, such people are disobedient, restless, cowardly and easily commanded by other children. They adopt rules of behaviour with difficulty, it requiring a constant supervision over them. They do not reveal any craving for studies, but demonstrate an early interest in liquor, diversions, amusements and idleness. They are not able to have sincere feelings, their family's misfortunes and troubles meet indifference from their part. They perceive their relatives as a source of means for well-being and delight. The situation of neglect, which provides wide opportunities for idleness and inactivity, is a weak link of the unstable people.

The conforming type. Its main feature is the urge towards generally accepted norms in all spheres of the life. The environment is a dictator of behaviour for such people, and they are not able to resist it at all. Having found themselves in a bad environment, they would rapidly adopt its manners, customs and habits, even if it contradicts their moral directions. "For company", the conforming juveniles would become inveterate drunkards, take part in multiple rapes, they are conservative and lack initiative. Under certain conditions, the conforming accentuation may act as a favourable ground for layers of other streaks.

Half of the cases of character accentuations is represented by mixed types. It is very important to determine a combination of these types of accentuations, because psychotherapeutic approaches to them should differ. Character accentuations most frequently manifest themselves within the period of the character making (at the juvenile age), and become smoother as the person is growing up. The accentuated streaks of the character are usually well compensated for.

Personality Disorders

Personality is defined as the dynamic organization within the individual that determines his/her unique adjustment to his/her environment. The personality can be described under five broad dimensions. These five dimensions, also called **personality traits**^{*3} can be remembered with the pneumonic, OCEAN.

1. **Openness to experience:** It reflects the curiosity, **novelty seeking**^{*3}, **sensation seeking**^{*3} and desire to have new experiences. Individuals with high openness to experience may indulge in activities such as skydiving, bungee jumping, gambling, etc.
2. **Conscientiousness:** It reflects the tendency to be organized, disciplined and dutiful.
3. **Extraversion:** It reflects the sociability, talkativeness and preference for group activities over solitary activities.
4. **Agreeableness:** It reflects compassion and cooperation for others and a trusting and helpful nature.

5. **Neuroticism:** It reflects the tendency to experience unpleasant emotions easily. It also refers to the degree of emotional stability.

If the personality of an individual deviates from social norms and is a cause of unhappiness and impairment, the individual is diagnosed with a personality disorder.

Diagnostic criteria for specific personality disorders

A. The inner experiences and behavior of the individual as a whole substantially and clearly deviate from the culturally accepted range (“Norms”). Such a deviation should manifest itself in more than one of the following areas:

- Cognitive sphere (i.e. the nature of perception and interpretation of objects, people and events)
- Emotionality (range, intensity and adequacy of emotional reactions)
- Drive control and satisfaction
- Relationship with others and manner of solving interpersonal situations

B. Lack of adaptability or other dysfunctional features are found in a wide range of personal and social situations (that is, they are not limited to one “trigger” or situation)

C. In connection with the behavior noted in paragraph B, personal distress or an adverse effect on the social environment is noted.

D. Deviation is stable and prolonged, starting in older childhood or adolescence

E. Deviation cannot be explained as a manifestation or consequence of other mental disorders of adulthood

F. As a possible cause of the abnormality, organic brain disease, trauma or brain dysfunction should be excluded.

Personality disorder is defined as presence of abnormal behavior and subjective experiences which causes significant impairment. The prevalence of personality disorder is around 10-20% in the general population. The onset is in **adolescence or early adulthood**^{*3}, the symptoms remain stable throughout the adult life and **maturing**^{*3} occurs by around **0 years**. Maturing means the resolution of abnormal patterns of behavior. The personality disorder is **"ego syntonic"**^{*3} (**agreeable to self**).

In other words, the individual with a personality disorder does not find anything wrong with himself and hence is often unwilling to take any treatment. DSM-5 has

classified the personality disorders into three clusters.

Cluster A Personality Disorders

The following personality disorders are included in cluster A:

- A. ***Paranoid personality disorder:*** The characteristic feature is **excessive suspiciousness** and distrust of others. These patients may be **excessively sensitive** and may be quick to react angrily. They give **excessive importance to themselves** and believe in conspiracy theories. Psychotherapy is the treatment of choice. Medications like benzodiazepines and antipsychotics may be used for agitation and paranoia (excessive suspiciousness).
- B. ***Schizoid personality disorder:*** These patients are **detached***³ from social relationships and **prefer solitary activities**. They are **emotionally cold**^Q and are indifferent to praise or criticism. They appear self-absorbed and lost in day dreams and may be preoccupied with fantasies. Since they are uncomfortable with human interaction, they have little interest in sexual activities. The management revolves around psychotherapy. The medications which are occasionally used include antipsychotics, antidepressants and benzodiazepines.
- C. ***Schizotypal personality disorder:*** These patients have disturbances of thinking and communication. They frequently exhibit **odd beliefs or magical thinking***³ (e.g. superstitiousness, belief in telepathy or "sixth sense"). Their inner world may be like that of a child, filled with fears and fantasies. They may have strange ways of communication making it difficult to understand.

They may also report illusions and other perceptual disturbances.

Schizotypal disorder is not considered as a personality disorder, instead it is classified as a psychotic disorder along with schizophrenia.

They usually do not have any close relationships and appear "odd and eccentric" to others. When in severe stress, they may decompensate and have psychotic symptoms, but these are usually brief. The management revolves around psychotherapy. The medications which are occasionally used include antipsychotics, antidepressants and benzodiazepines. The "cluster A" personality disorders (especially schizotypal personality disorder) are considered to be on a "schizophrenia continuum" which means that they lie somewhere in between the "normal" and "schizophrenia"

Cluster B Personality Disorders

The following personality disorders are included in cluster B:

- A. ***Histrionic personality disorder***: These patients are excitable and overtly emotional and behave in a dramatic and extroverted way. They want to be the center of attention and exaggerate everything, making it sound more important than it really is. They tend to behave in a sexually seductive manner and use physical appearance to draw attention towards self. Management usually involves psychotherapy. Medications like antidepressants are occasionally useful.
- B. ***Narcissistic personality disorder***: These patients have a heightened sense of **self-importance**^Q. They believe that they are special and very talented. They are preoccupied with fantasies of unlimited success and power. They want to be admired by others. If condemned, they may become very angry or they may show complete indifference to criticism. They have a fragile self-esteem and are susceptible to development of depression, when faced with rejection. Management usually involves psychotherapy. Medications like antidepressants are occasionally useful.
- C. ***Antisocial personality disorder (dissocial personality disorder)***: These patients do not have regard for rights of others and frequently violate them. They frequently get involved in unlawful behaviors such as theft, lying, truancy and conning. They have a lack of remorse or guilt for their actions. Substance use disorders are frequently present in these patients. Treatment usually is psychotherapy. Medications like carbamazepine, beta blockers are occasionally used.
- D. ***Borderline personality disorder***: These patients are almost always in a state of crisis. They have significant **mood swings**. They may start feeling angry, anxious or frustrated without any reason. Their interpersonal relationships are intense and tumultuous. They swing from being excessively dependent to being hostile to persons close to them. Hence, they have a history of **unstable relationships**. Another characteristic feature is the repetitive **self-destructive acts**^Q such as slashing of wrists, or over dosage of medications. The patients indulge in these behaviors to elicit help from others, to express the anger or just to numb themselves to the overwhelming painful feelings they have. These patients are also **impulsive** in areas such as spending, sex and substance use. These patients have **identity disturbances** and have **unstable self image** (they have sudden changes in life goals, values, career plans, sexual identity etc).

Finally, these patients excessively use the defense mechanism of **splitting** (wherein they consider each person to be either "all good" or "all bad"). Management involves psychotherapy. **"Dialectical behavior therapy"** is a

therapy which has been designed for treatment of borderline personality disorder. Medications used include antipsychotics, antidepressant and mood stabilizers like carbamazepine. In ICD-10, the borderline personality disorder has been described as a subtype of a broader diagnosis of "emotionally unstable personality disorder"

Cluster C Personality Disorders

The following personality disorders are included in cluster C:

- A. ***Avoidant personality disorder:*** These patients are excessively **sensitive to rejection**. They are afraid that they would be criticized or rejected in social situations. Hence, they tend to remain socially withdrawn. These persons are usually unwilling to enter into a relationship unless they are given a strong guarantee of uncritical acceptance. The ICD-10, uses the diagnosis of anxious personality disorder for such patients. Management mostly involves psychotherapy. Beta blockers and selective serotonin reuptake inhibitors (SSRIs) are also useful.
- B. ***Dependent personality disorder:*** These patients are **dependent** on others for everyday decisions. All the major decisions in their lives are taken by someone else. They ask for excessive amount of advice and reassurance from others. They also have difficulty expressing disagreement with others because of fear of loss of support. They get very uncomfortable and helpless when alone and fear that they would not be able to take care of themselves. Management usually involves psychotherapy. Benzodiazepines and SSRIs can be used for symptomatic relief.
- C. ***Obsessive-compulsive personality disorder:*** These patients are preoccupied with rules and regulations. They give excessive importance to details and show perfectionism that interferes with task completion (since they want everything to be perfect, it often results in significant delays). They are inflexible and insist that others agree to their demands. They are excessively devoted to work and may not have any time for leisure

Treatment and rehabilitation. The treatment of psychopathies should proceed from the principle of the complex character and consist of drug influences, social and pedagogical measures. Use of drug preparations is necessary at the period of decompensations and in "profound psychopathies". When administering medicines, one should be guided by a division of personality abnormalities into psychopathies of the excitable and inhibitable types. In cases of exacerbation of the former psychopathies, manifested by maliciousness, aggressiveness, explosiveness, disinhibited drives, neuroleptics are to be administered: Neuleptil (a "behaviour corrector"), some cases require aminazine and sonapax. Decompensations of the paranoiac type of psychopathy,

with formation of stable delusional ideas and absence of criticism, require administration of antipsychotic drugs, such as neuleptil, risperidon, haloperidol, tiserpine. Carbamazepine is administered for dysphoriae. In patients with pathological personality streaks of the inhibitable type, it is better to prescribe tranquillizers directed at reducing their anxiety, loss of actualization of hypochondriacal feelings, morbid doubts. Phenazepam, Sibazon, tazepam, hydazepam, helenium may be drugs of choice. For decompensation of psychopathies with prevailing asthenic disorders, nootropic drugs (nootropil, pyriditol) and psychostimulants are administered. Antidepressants (SSRI) are indicated for patients with a disposition to dysthymia. Psychotherapy takes the leading place in the treatment of pathological personalities. Its different kinds are used: cognitive-behavior therapy, rational psychotherapy with explanatory talks about characterological peculiarities of the psychopath, his excessive demands made to his associates. Variants of hypnotherapy and autogenic training are possible. A particular part in the medical-rehabilitative measures is played by the organization of the social environment: a correct work orientation, cultivation of moral-ethic and socially approved standards of behaviour.

TREATMENT OF MENTAL DISEASES. PSYCHOEDUCATION AND REHABILITATION OF MENTAL PATIENTS

The treatment of mental diseases is divided into kinds according to the object pursued and methods used. Like in other medical fields, depending upon its purpose, the following types therapy are isolated: *etiological*, *pathogenetic*, *symptomatic*, *general health-improving*, etc. Disintoxication in intoxication psychoses is an example of etiological therapy in psychiatry. Shock therapy in some forms of schizophrenia may serve as an example of pathogenetic therapy, i.e. the one directed at interfering in the mechanism of the illness development and interrupting its course. Symptomatic treatment is used for removing some distressing or dangerous manifestations of an illness. For instance, in order to rapidly remove acute anxiety, anticonvulsants (tizercine, Seduxen, phenazepam, etc.) are employed.

It is customary in psychiatry to designate specific kinds of therapy depending upon their certain tasks.

Controlling therapy is directed at a rapid removal of severe acute manifestations of mental disorders (excitement, hallucinosis, etc.). Usual for such cases is parenteral administration of relatively large doses of psychoactive drugs, neuroleptics in particular. As soon as the acute manifestations are removed, the doses are reduced, the drugs are taken orally, and other medicines are used with a slower but more selective effect for certain disorders. Interruption of alcoholic delirium (“delirium tremens”) with intravenous infusions of Sibazone (Relanium) serves as an example of controlling therapy.

Maintenance therapy is employed when an effect (from actual recovery to some improvement) has been achieved, but an absolute discontinuation of the treatment threatens with a relapse or aggravation of the state. Usually, reduced doses of effective drug preparations are used or potent medicines are substituted for with milder ones. A sudden discontinuation of maintenance therapy is often accompanied by the “withdrawal reaction”, the “withdrawal syndrome”, manifesting itself by both an aggravation of the mental state and autonomic disorders. Following discontinuation of maintenance therapy, relapses often occur not immediately, but 2-3 weeks later. Maintenance therapy is given during many months and years. In order to save the patient from a necessity to take medicines several times a day and to be sure that it regularly comes to the organism, long-acting drugs (“depot preparations”) are used. Intramuscular injections of such medicines are given once during 1-3 weeks (Moditen-depot, IMAP, etc.). Also, there are long-delayed oral drugs (pimozide, etc.). It is enough to take them once a day, as their absorption is slow. A shortcoming of long-acting drugs, particularly for intramuscular administration, consists in an impossibility,

if necessary, to rapidly discontinue the treatment, as well as a necessity to continue oral taking of correctors.

Corrective therapy, or employment of special medicines, is directed at removal of distressing side effects of psychoactive drugs (mainly in the form of extrapyramidal disorders). Most of these drug preparations, especially haloperidol, moditen, clopixon, cause parkinsonism-like disorders: tremor of muscles, constraint, etc., as well as fits of cramps in some muscles (those of the eyeballs, tongue, neck, etc.). To remove these disorders, a systemic oral taking of antiparkinsonian drugs are administered, most often this is cyclodole (Artane, Romparkin, Parkopan).

Preventive, or anti-relapse, therapy is essentially a variety of the maintenance one, but it is given against a background of recovery or good remission. A break in the therapy does not always entail an immediate relapse. As an example, it is possible to mention treatment with lithium salts for manic-depressive psychosis; their regular use prevents development of the next phase.

The struggle with therapeutic resistance, i.e. tolerance to a drug, addiction, which oftener develops in cases of chronic mental disorders and long-term treatment with psychoactive medicines, includes different special ways intended for augmenting effects of drugs or increasing the organism's sensitivity to them. These ways include aforethought breaks in the treatment with the resultant "withdrawal syndrome", electroshock therapy, etc.

In compliance with the methods employed, the treatment of mental disorders is divided into *drug therapy*, *psychotherapy*, as well as *social therapy* and *rehabilitation* as a system of measures for restoration (full or partial) of the patient's social status. The treatment of every patients is usually complex, including methods of all the kinds of therapy, prevention of complications and increase of the organism's defensive strength.

Drug therapy includes use of all the medicines, psychoactive ones being among them, as well as hormones, enzymatic drug preparations, vitamins and other biologically active substances.

Treatment with psychoactive medicines. At present, this group of drugs is the main method in the therapy of mental disorders. The group is usually divided into *neuroleptics*, *tranquillizers*, *antidepressants*, *thymostabilizers*, *psychostimulants* and *nootrops*. *Psychodysleptics* (*psychotomimetics*, *hallucinogens* and "psychodelic" drugs) belong to psychoactive medicines too, but they are not used for treatment in our country.

Neuroleptics. These psychoactive drugs are most frequently administered for treating psychoses, but their small doses are used in nonpsychotic (neurotic, psychopathic) disorders. Neuroleptics suppress the patient's excited mental activity and produce the antipsychotic (removal of delusions and hallucinations), antiaggressive (weakening of psychomotor activity), psychosedative (impoverishment of emotions and feelings) and anxiolytic (removal of pathologic anxiety) effects, whose mechanisms are connected with suppression of adren- and dopaminergic receptors in the central interneuronal synapses. An influence on these systems also explains a number of other effects peculiar to neuroleptics (anticonvulsant, myorelaxant, potentiating, hypothermal, hypotensive, antiemetic, etc.), including side ones (extrapyramidal disorders).

The group of neuroleptics consists of:

I. Phenothiazine derivatives.

A. Aliphatic line (aminazine, propazine, methotrimeprazine).

B. Piperazine line (zuclopentixol, flupentixol, meterazine, perphenazine, frenolon, trifluoperazine, quetiapine, fluphenazine, fluphenazine-decanoate).

C. Piperidine line (periciazine, thioridazine).

II. Thioxanthene derivatives (chlorprothixene).

III. Butyrophen derivatives (droperidol, haloperidol, trifluoperidol).

IV. Diphenylbutylpiperidine derivatives (flushperilen, pimozide).

V. Dibenzodiazepine derivatives (azaleptine, olanzapine).

VI. Indole derivatives (carbidine).

VII. Substituted benzamides (sulpiride, thiapride).

VIII. Derivatives of pyrimidine and imidazolidinon (risperidone, sertindole).

By the character of their effect on psychotic symptoms, 3 main groups of neuroleptics are isolated: 1) neuroleptics *with primary sedative effect* (aminazine, tizercine, Truxal); 2) neuroleptics *with general antipsychotic effect* (aminazine, trifluoperazine, haloperidol); 3) neuroleptics *with antipsychotic effect accompanied by stimulating component* (meterazine, perphenazine, frenolon, sonapax, Neuleptil, chlorprothixene, eglonil).

Depending upon the expressiveness of extrapyramidal disorders, all neuroleptics are subdivided into “*typical*” (I, II, III) and “*atypical*” (IV, V, VI, VII, VIII) ones. With usual clinical dosages, “*atypical*” antipsychotic drugs do not cause extrapyramidal side effects. Characteristic of “*atypical*” neuroleptics (azaleptin, olanzapine, rispolept, seroquel) is a less expressed relation to dopamine D2 receptors, it is their blocking that results in extrapyramidal effects. They have a more expressed relation to D1 receptors, it ensuring control over productive symptoms, and to serotonin

5HT₂ receptors, binding with whom may provide efficacy with respect to negative symptoms in schizophrenia.

Aminazine (Chlorpromazine) is the first psychoactive drug, with which psychopharmacology started to develop. Its antipsychotic and potent psychosedative effects were discovered by French psychiatrists J. Deley and P. Deniker in 1952. Before that time chlorpromazine was used in veterinary medicine as an anthelmintic. In order to remove psychomotor excitement, it is administered intramuscularly. It may cause collapse-like states. Its long-term use contributes to the development of depressions, parkinsonism-like disorders, thromboembolism. Jaundice and agranulocytosis are rare. Contraindications include diseases of the liver, kidneys, heart and haemopoietic organs, a disposition to the formation of thrombi. Aminazine may give rise to allergic reactions, and not only in the treated people, but even in the staff who gave injections.

Haloperidol is indicated for both acute and chronic mental disorders; it produces both antipsychotic and potent sedative effects. It serves for controlling different kinds of excitement (maniac, catatonic, delusional, etc.). In these cases it is injected intramuscularly or by drops intravenously. It is more effective in hallucinoses, than trifluoperazine. Chronic disorders are treated with drops and tablets. Haloperidol causes expressed extrapyramidal disorders. Fits of convulsive cramps of the tongue, neck, eyes and face may occur. Only small doses (up to 1-2 mg/day) can be used without benzhexol hydrochloride. Haloperidol is contraindicated in organic lesions of the brain, when parkinsonism-like disorders are particularly frequent and severe, and even resist any correction with benzhexol hydrochloride. In cases of solar irradiation, dermatitides may develop.

Fluphenazine (Moditen depot) (IMAP – intramuscular antipsychotic) is the most common as a long-acting drug (fluphenazine-decanoate, Moditen-depot) for maintenance treatment. It has both an antipsychotic and “behaviour-normalizing” effect in psychopathy-like disorders. Intramuscular injections are given once every 2-3 weeks. Rather often they have to be combined with a regular oral taking of benzhexol hydrochloride.

Azaleptin (Clozapine) produces an expressed antipsychotic effect, but, unlike other neuroleptics, it does not cause any extrapyramidal disorders and general depression. It is used for hallucinatory-delusional and affective-delusional disorders, particularly in chronic cases. The treatment may be complicated by deliria (they are usually preceded by bright colour dreams), sharp tachycardia and a higher body temperature. Collapses and agranulocytosis seldom occur.

Methotrimeprazine (Tizercine) produces a potent antianxiety effect and is notable for a soporific action. It is often administered only for nights as a subsidiary medicine. It can cause a sharp drop of blood pressure and collapse-like states.

Chlorprothixene removes anxiety, fear, restlessness, but, unlike tizercine, does not cause any severe listlessness and sleepiness, therefore it can be resorted to even at daytime.

Periciazine (Neuleptil) has acquired a reputation of a “behaviour corrector”. It is widely used in paediatric and juvenile psychiatry for psychopathic disorders: it removes aggressiveness, restlessness, disinhibition (including sexual one), affective outbursts. Correction with benzhexol hydrochloride is required only when large doses are taken.

Thioridazine (Sonapax, Melleril) is mainly used for nonpsychotic disorders: a higher affectivity, short temper, neurotic anxiety. It suppresses sexual activity and delays the approach of an orgasm.

Clopixol (Zuclopentixol) produces expressed antipsychotic, specific inhibitory and nonspecific sedative effects. Its specific inhibitory action is particularly important when treating patients with agitation, restlessness, hostility or aggressiveness. Clopixol can also produce a transitory, dose-dependent nonspecific sedative effect, whose rapid development in the beginning of therapy (before the antipsychotic action begins) is advantageous for treating acute psychoses.

Fluanxol (Flupentixol) is notable for different pharmacological effects of its small, average and large doses. It is supposed that, along with a prevailing mechanism of pharmacological action, typical for neuroleptics from the group of thioxanthene derivatives, there is some relation between flupentixol and serotonin 5HT₂ receptors. It explains the antiautistic and activating effect characteristic of small and average doses of the drug. At the doses of 0.3-0.5 mg/day flupentixol produces antidepressant, anxiolytic and activating effects. It is used for mild and moderate depressions with anxiety or asthenia and apathy, as well as in neurotic anxious, asthenic and psychosomatic disorders. The antipsychotic action of flupentixol manifests itself in cases of administration a daily dose over 3 mg, and its expressiveness increases with enlargement of the dose. It is indicated for schizophrenia and other chronic psychoses with hallucinatory-paranoid symptoms, also accompanied by apathy, anergy and autism. The drug produces disinhibitory effect, facilitates activation of the patients who shut themselves off and are passive,

increasing their communicability and social adaptation. High doses of flupentixol have a sedative effect.

Sulpiride (Eglonil) produces the best effect in mild depressions, mostly manifesting themselves by asthenia, apathy and anergy. No side effects are usually caused. Only a disturbance of the menstrual cycle is possible.

Olanzapine (Zyprexa) displays a higher extent of binding to serotonin 5HT₂ receptors versus D₂ ones. It is administered for treating acute forms of schizophrenia and other psychoses with clearly expressed productive symptoms (delusions, hallucinations, disturbances of thinking, hostility and suspiciousness) and/or negative symptoms (a dull affect, emotional and social estrangement, poor speech activity), as well as for maintenance treatment. Olanzapine also alleviates secondary affective symptoms caused by schizophrenia. It is purposeful to provide long-term treatment for those patients who are sensitive to therapy at its initial stage, olanzapine producing a statistically reliable decrease in the manifestation of both negative and positive symptoms of the illness.

Risipolept (Risperidone) belongs to “atypical” neuroleptics, whose mechanism of therapeutic action is based on a balanced central antagonism of the drug to serotonin and dopamine. In this connection, the therapeutic action of this medicine involves the productive symptoms, as well as negative and affective symptoms of schizophrenia. It is indicated for treating acute attacks of schizophrenia, schizoaffective psychosis, other psychotic disorders with productive symptoms, for maintenance antirelapse therapy in schizophrenia. An early beginning of risipolept therapy makes it possible to achieve preservation of cognitive functions with the minimum stigmatization of the patients. Risipolept is also indicated for correcting behaviour disorders and treating psychotic symptoms in patients with dementiae.

Tranquillizers. This group of drugs is used for removing anxiety, restlessness, affective strain, and in order to normalize psychopathy-like behaviour. Such an action is called anxiolytic (removal of restlessness resulting from some objective cause) and sedative. They do not produce any antipsychotic effect. No extrapyramidal disorders occur. The mechanism of the action is related to excitation of benzodiazepine receptors in the limbic system and reticular formation, which in its turn activates GABA receptors and increases an income of chlorine ions with a resultant hyperpolarization of the membranes and inhibition of the neuronal activity. It also produces sedative, soporific, anticonvulsant effects, potentiating and myorelaxation. The side effect are represented by suppression of attention (for this reason, tranquillizers are not used in the process of such work

activity which requires preservation of attention and coordination of movements), addiction and even development of drug dependence (stimulation of serotonin receptors results in a reduced activity of the neurons which synthesize serotonin).

Tranquillizers are divided into the following groups of drugs: 1) agonists of benzodiazepine receptors (diazepam, phenazepam, etc.); 2) agonists of serotonin receptors (buspirone, campirone, etc.); 3) substances with different types of effect (benactyzine, etc.).

Sibazon (Seduxen, Relanium, Diazepam, Valium), if infused intravenously, controls deliria, acute anxiety, convulsive seizures and dysphoriae (attacks of some malicious-melancholic mood with a disposition to aggression). It is orally used for neurotic anxiety, nonpsychotic depression, annoying thoughts. Its long-term taking may develop addiction and weakness for it. Large doses are abused for causing euphoria. If combined with liquor, it sharply intensifies intoxication.

Phenazepam is an original Ukrainian drug preparation. It suppresses excitement and the feeling of fear, even in situations of a real danger, but it causes listlessness, a delay of reactions, and sleepiness. It is indicated for nonpsychotic anxiety and annoying thoughts, as well as for depersonalization and derealization.

Chlozepid (Helenium) is now less common than other tranquillizers. It is administered in neurotic disorders: annoying thoughts, anxiety, hypochondria. Its side effects include listlessness and (sometimes) cerebellar ataxia.

Nozepam (Tazepam) is the mildest tranquillizer. It causes neither listlessness, nor sleepiness, but delays reactions (it should not be taken when driving). It is indicated for outpatient treatment of neurotic and neurosis-like disorders. It does not cause addiction even after a long-term use.

Alprazolam (Cassadan, Xanax) is a mild tranquillizer with antidepressive activity. The medicine produces antianxiety, moderate soporific, antiphobic, autostabilizing and anticonvulsive effects. A rapid anxiolytic effect of alprazolam may be accompanied by an euphoric action, thereby predisposing a nonmedicinal use of the drug. Alprazolam is used in the treatment of different anxiety syndromes: it effectively controls generalized anxious disorders, agoraphobic states, including those which manifest themselves with panic attacks.

Tranxen (Clorazepam, Tranxilium) produces a clear anxiolytic and moderate soporific effects with a mild expressiveness of the myorelaxant and sedative effects. It has a wide range of indications in psychiatry: psychopathies and

neuroses with manifestations of anxiety, anxious depression, tics, for preventing delirium in cases of liquor withdrawal.

Hydazepam is characterized by a moderate anticonvulsant action, mild myorelaxant and sedative ones. This is a tranquillizer with an activating effect, autonomic stabilizing and soporific properties. It is indicated for neurotic and neurosis-like disorders with easy fatigability, short temper, depression and sleep disturbances. Owing to its mild action, it may be used for treating patients with an organic lesion of the CNS of various genesis, elderly and weakened patients.

Hydroxyzine (Atarx) is an anxiolytic with antihistamine, spasmolytic and weak antiemetic effects. It is used in neuroses, whose course is characterized by motor excitement and the feeling of fear in elderly patients, in manifestations of the abstinence syndrome in patients with chronic alcoholism, in childhood neuroses with an expressed psychomotor excitement, in pruritic dermatoses, allergic rhinitis. It is used within the postoperative period as an antiemetic and sedative drug.

Mebicar produces a good antineuritic effect, a mild hypotensive one, as well as analgetic, antidepressive and activating ones. There is no significant sedative and myorelaxant action. It is indicated for neuroses with adynamia and asthenic syndrome. It belongs to a group of "daytime" tranquillizers. It is used as an agent reducing a drive to tobacco smoking (in combined therapy).

Buspirone (Buspar) manifests anxiolytic properties, but it does not produce any sedative and soporific effects; it actually does not cause any addiction, it being his advantage over benzodiazepine derivatives. The anxiolytic effect of buspirone develops slowly (during 5-15 days) and resembles that of diazepam by its clinical characteristics. Buspirone is comparable with typical benzodiazepine derivatives by the efficacy of its influence on a generalized anxious disorder, but it is unable to develop a rapid action. Buspirone has moderate thymoanaleptic properties (which may be caused by its serotonergic influence). A stable antianxiety effect of buspirone is preserved if the drug is taken continuously. Even after many years of receiving buspirone the cessation of its taking does not cause the withdrawal syndrome. The administration of buspirone is limited by absence of any rapid development of the anxiolytic effect, therefore it is of little use for treating acute states and paroxysmal panic disorders.

Antidepressants. This is a group of psychoactive drugs which remove depression (morbid blues). They are most effective in endogenous depressions. Their effect against reactive depressions caused by psychic traumas is significantly

weaker. Some antidepressants are more effective in depressions manifesting themselves by melancholia, others in anxious depressions. The mechanism of the antidepressive action of the drugs may be related to suppression of the reverse neuronal uptake of catecholamines or suppression of monoamine oxidase activity in the central interneuronal adrenergic synapses. These mechanisms form the basis of the current classification of antidepressants:

1. Drugs suppressing the neuronal uptake of monoamines.
 - 1.1. Nonselective effect (imipramine, amitriptyline).
 - 1.2. Selectively blocking the uptake of noradrenaline (maprotiline).
 - 1.3. Selectively blocking the uptake of serotonin (fluoxetine, sertraline, citalopram, paroxetine).
2. MAO inhibitors.
 - 2.1. Irreversible, nonselective effect, MAO-A and MAO-B (nialamide, transamine).
 - 2.2. Reversible, selective effect, MAO-A (moclobemid).

By the character of their action on psychotic symptoms, 3 groups of antidepressants are separated: 1) with a stimulatory effect (imipramine, cefidrine, petilin, nialamide, anafronil, transamine, indopan, bediul, iprazide, moclobemid, tetrindol, incasan); 2) with a sedative effect (amitriptyline, fluoracizine, herfonal, opipramol, damilen, azophen, trazodone, chloracizine); 3) with a stabilized stimulatory and sedative effect (pyrazidol, fluvocasamine, maprotiline).

Imipramine (Imizine, Melipramine, Tofranil, Anafranil) is mostly indicated in severe melancholic depressions with the feeling of anguish, inhibition, low spirits. The treatment usually begins with the parenteral administration (intramuscularly, by drops intravenously). An improvement comes after 4-5 days, then a change is made for oral taking. Melipramine disturbs sleep, therefore it should not be given before the night. Tizercine is often added before the patient goes to sleep. Melipramine may intensify anxiety, activate delusions and hallucinations. So, if depression is accompanied by such disorders (e.g., in schizophrenia), sedative neuroleptics are added to melipramine. The side effects include tachycardia, urinary retention (it is contraindicated for adenoma of the prostate), dryness in the mouth, a disturbance of accommodation (difficult reading). In manic-depressive psychosis, melipramine may contribute to a change from the depressive phase to the maniac one.

Amitriptyline (Tryptizol) is mostly used for anxious depressions. Its antidepressive effect is combined with the sedative one; it does not exacerbate

delusions and hallucinations. The side effects are the same as caused by melipramine.

Pyrazidal is a Ukrainian drug, rather similar by its effect to amitriptyline. It is considered that this medicine calms anxious patients and encourages depressed ones. It is well tolerated and usually does not cause any side effects.

Moclobemid (Aurorix) is effective in mild depressive disorders and social phobias. Its efficacy rate in psychotic depressions is somewhat lower. Along with the antidepressive effect, the spectrum of the psychopharmacological action of this medicine clearly reveals the psychoactivating effect, it is more effective in depressions with a melancholic component.

Anafranil (Clomipramine, Hydiphen, Clofranil) is a potent antidepressant with a so-called bipolar component of action, i.e. its activating and anxiolytic effects are equally expressed. The drug does not have any significant sedative property, the feeling of tiredness, a dissociation between the increasing activity and still existing melancholy, it being dangerous because of suicidal consequences. It is indicated for neurotic and endogenous depressions, including their protracted forms. It is successfully used for treating annoying thoughts and panic attacks.

Coaxil (Thianeptin) produces expressed antidepressive and anxiolytic effects when treating nonpsychotic anxious-depressive disorders. The drug has neither stimulating nor sedative properties. Along with neurotic depressive and somatoform disorders, the indications of coaxil also include chronic alcoholism at the period of abstinence accompanied by anxiety and depression.

Herphonal (Trimipramine) produces equally good effects both on depressions with inhibition and those with excitement. Its use is indicated in depressive states with various nosology, it is effective for sleep disturbances, the feeling of fear and restlessness. Its use is recommended for chronic painful conditions in somatic practice.

Mianserin (Lerivon, Miansan) has rather expressed thymoanaleptical and sedative properties, it contributes to the development of the soporific effect. By the intensity of its antidepressive action it yields to tricyclic antidepressants, but is more active in depressions of the nonpsychotic level.

Fluoxetine (Prozac, Prodep, Portal, Fludac, Framex) belongs to those antidepressants which combine the thymoanaleptical and stimulatory effects. Besides, it facilitates reduction of obsessive-compulsive disorders. It causes reduction of appetite and can be used for treating bulimia nervosa.

Paroxetine (Paxil, Seroxat) is used in depressions of different genesis, especially anxious depression because of its anxiolytic effect. Paroxetine produces the antidepressive effect with a mild tonic action.

Sertraline (Zoloft) is indicated for different forms of depression, including those which are accompanied by anxiety. It is used for treating obsessive-compulsive and panic disorders. Sertraline does not produce any expressed sedative or stimulatory effects.

Cipramil (Citalopram) is notable for a higher selectivity, if compared with other antidepressants of this group. It is recommended for depressions with different nosology and degrees of expressiveness, including somatic patients. The antidepressive effect of the medicine is accompanied by its good tolerance and safety when using together with somatotrophic drugs, cardiotoxicity is absent. Cipramil has the anxiolytic property, as well as the sedative and stimulatory effects which balance each other. It is recommended for use in somatized depressions, in combined treatment of alcoholism and narcomania.

Remeron (Mirtazapine) combines its powerful thymoanaleptical activity with an expressed anxiolytic effect, thereby making it possible to administer the medicine for a wide range of borderline and psychotic depressive disorders.

Thymostabilizers are drug preparations capable of preventing repeated phases of affective disorders in manic-depressive and schizoaffective psychoses. The preventive treatment is given during many months and years. They are represented by lithium preparations.

Lithium carbonate controls maniac phases and prevents subsequent depressive and maniac ones. The dose is individually selected under the control of lithium level in the blood, which is maintained at the level of 0.6-1.6 mM/l. The drug should not be administered during depressions, as the depressive phase may become protracted. Diarrhoea has been noticed as a side effect. Tremor of muscles and thirst are signs of overdosage. Impairments of the kidneys and thyroid have been described as complications.

Lithium oxibutyrate differs from its carbonate by a less toxicity and a higher activity. It is soluble in water; its intramuscular injections may be used for controlling maniac states.

Valproate (Depakine, Convulex, Orfiril). The effect of Valproate is based on its ability to increase inhibition of GABA-ergic receptors, thereby decreasing recurrent discharges of neuron membranes. It belongs to antiepileptic drugs, but

also has the property to treatment of maniac phases of bipolar affective psychoses and prevents development of maniac and depressive phases. The drug is used with a dose of 1.2-1.8 g/day as a single dose or 2-3 divided ones. For children, the dose is 20-30 mg/kg. The drug is contraindicated in cases of hepatic diseases and a hypersensitivity to it.

Lamotrigine (Lamictal) inhibits strain-dependent sodium channels of the presynaptic membrane and a strain-related discharge of stimulating neurotransmitters of aspartate and glutamate into the synaptic cleft. This drug is effective in treatment of depressive phases of bipolar affective psychoses and prevents development of maniac and depressive phases. The dose for children is 2-10 mg/kg/day; if combined with other drugs it is 1-5 mg/kg/day. The dose for adults is 100-200 mg/day.

Carbamazepine (Finlepsin, Tegretol) belongs to antiepileptic drugs, but also has the property to prevent development of maniac and depressive phases. It is indicated for dysphoriae (attacks of a malicious-melancholic mood) in epileptoid psychopathy and epilepsy. The medicine is well tolerated, side effects are rare.

Psychostimulants are drug preparations which improve mood, ability for perceiving external stimulants, psychomotor activity. They reduce the feeling of fatigue, increase physical and mental capacity for work (particularly in cases of tiredness), temporarily reduce the need of sleep. These effects are based on a more intensive transmission of the process of excitation in the central interneuronal synapses, a higher adrenergic tone in the CNS and a stimulation of metabolic processes in nerve cells. These medicines are rather seldom used in the psychiatric practice. They are indicated for asthenic states. Psychostimulants are represented by the following medicines: 1) phenyl alkylamines – phenamine; 2) piperazine derivatives – methylphenidate hydrochloride; 3) sidnonimines – sidnocarb; 4) methylxanthines – caffeine; 5) benzimidazole derivatives – bemitil.

But such psychostimulants as phenamine (Amphetamine), methylphenidate hydrochloride (Centedrine, Methylphenidate) and caffeine easily cause addiction and weakness for them. Phenamine is included in the group of narcotic drugs.

Sidnocarb is a Ukrainian drug preparation, which does not cause either addiction or weakness for it. It is prescribed for protracted neurotic and somatogenic astheniae. It is to be taken in the morning and daytime, as it may disturb sleep. Its overdose causes sleeplessness, short temper and restlessness. It should not be administered in psychoses.

Sidnophen is a medicine, similar to Sidnocarb by its effect, but weaker of it as a stimulant. It is characterized by the antidepressive effect in asthenic depressions.

Nootrops are substances which activate higher integrative functions of the brain. The main manifestation of their activity consists in a favourable effect on disturbed training and memory, as well as a higher resistance of the CNS to hypoxia, it being achieved by activation of cerebral metabolic processes and circulation. The drugs have been created on the basis of substances of the biogenic origin (GABA, glutaminic acid, vitamins) and are called remedies of the “metabolic” therapy.

Classification of nootropics

1. GABA derivatives: pyracetam, phenibut, aminalon.
2. Combined: neoglutin, pyriditol, orocetam, pantigam, vitapyracen.
3. Brain vasodilators: stugeron, cavinton, sermion, vinpocetin.
4. Different: aminalon, gingoging, encephabol, tanacan.

They are used in psychiatry in order to improve the capacity for work, an ability to concentrate attention, as well as to make better functions of the brain, memory and general state.

Pyracetam (Nootropil) is a GABA derivative. It is recommended for asthenic, asthenodepressive and asthenoapathic states. No side effects are caused. An overdose may manifest itself with short temper and sleep disturbances. It is used as an additional remedy in neuroleptic treatment for removing listlessness and sleepiness (i.e. as a corrector), as well as in posttraumatic and vascular mental disorders.

Aminalon (Gammalon, Ganeurin) is gamma aminobutyric acid. It is most frequently used in vascular diseases of the brain accompanied by chronic cerebrovascular insufficiency. A good effect is produced in cerebroasthenic and encephalopathic states of different etiology. It improves memory and thinking, contributes to the restoration of speech and movements after disturbances of the cerebral circulation, produces a mild psychostimulating effect, improves the state of patients with asthenodepressive manifestations. Aminalon is used in paediatric practice for a retardation of the psychic development. It is administered orally (before meals) by 0.5 g, 3-4 times a day, the daily dose is 1.5-3 g. A course of the treatment lasts from 2-3 weeks to 2-6 months.

Pyriditol (Encephabol) is pyridoxine disulphide. It is used in combined therapy for asthenodepressive, asthenoapathic and neurosis-like states of the

exogenic-organic nature (in posttraumatic, postinfectious, vascular encephalopathy). In paediatric practice, it is used for a retardation of the psychic development, cerebroasthenia, oligophrenia. It is administered in courses by 2-3 months orally, 15-20 minutes after meals 2-3 times a day (at daytime); a single dose for adults is 0.1-0.3 g, their daily dose is 0.2-0.6 g; a single dose for children is 0.05-0.1 g, their daily dose is 0.05-0.3 g.

Pantogam is a calcium salt. The drug is effective in asthenic states of the organic and endogenic genesis, in neurosis-like (neurasthenic, dyssomniac, obsessive-phobic, hypochondriacal) disorders, it alleviates vasopathic and neuroautonomic manifestations. It is also used for treating epilepsy in a complex with anticonvulsant medicines. Administration of the drug for patients with extrapyramidal hyperkineses, caused by a long-term taking of neuroleptics, significantly reduces expressiveness of these complications. *Pantogam* is taken orally (15-20 minutes after meals) by a single dose of 0.25-0.5 g for children and 0.5-1.0 g for adults. The daily dose is 0.75-3.0 g for children and 1.5-3.0 g for adults.

Acephen (*Centraphenaxin*, *Lucidril*) is indicated for asthenic, asthenohypochondriacal states of the vascular genesis, endocrine disorders, organic lesions of the brain, neuroses. *Acephen* is used in the clinical treatment of nervous diseases for autonomic dysfunctions and disturbances in the cerebral circulation. It is administered orally by 0.1-0.3 g 3-5 times a day, subcutaneously, intramuscularly and intravenously.

Phennibut is a phenyl derivative of GABA. It is administered orally before meals by 0.3-0.5 g 3 times a day.

Picamilon is used in adults as a nootropic and vascular drug for mild and moderate disturbances of the cerebral circulation, autonomovascular dystonia, abstinence in alcoholic patients. In cases of vascular diseases, a single dose of the medicine is 0.02-0.05 g, 2-3 times a day. A course of the treatment lasts 1-2 months, it may be repeated 5-6 months later. For treating depressive states in elderly people, *Picamilon* is recommended by daily doses of 0.04-0.2 g during 1.5-3 months. At the period of abstinence in alcoholic patients the daily dose is 0.1-0.15 g for 6-7 days.

Nootrops include *cerebrolysin*, *glutaminic acid*, as well as those medicines which improve the cerebral circulation and psychic processes at the same time (*sermion*: tablets by 0.005 g and ampoules by 0.004 g for a parenteral administration, the daily dose is up to 25 mg; *cavinton*, *cinnarizine*, *trental*, etc.).

Below, doses of psychoactive drugs are recommended and their synonyms are given.

Azaleptine – see Clozapine.

Aminazine: intramuscularly from 2 to 5 ml of 0.25 % solution diluted with novocaine, 1-3 times a day. Oral 25 mg lozenges after meals, from 1 to 4 times by 1-6 lozenges (25-600 mg/day). Large doses are seldom used.

Amitriptyline: intramuscularly or intravenously by 2-4 ml of 1 % solution 2-4 times a day; oral 25 mg tablets by 1-3 pieces, 1-3 times a day (25-250 mg/day).

Haloperidol: intramuscularly by 0.5-1.0 ml of 0.5 % solution 2-3 times a day; oral tablets by 1.5 and 5 mg, or drops in the form of 0.2 % solution (10 drops contain 1 mg of haloperidol) at a dose of 1.5-15 mg, 1-3 times a day (the dose is to be selected gradually and individually).

Diazepam – see Seduxen.

IMAP: an intramuscular injection of 2-5 ml (4-10 mg), 1 time a week.

Imizine – see Melipramine.

Imipramine – see Melipramine.

Carbamazepine: oral 0.2-0.5 g tablets up to 2 pieces 1-2 times a day.

Clozapine: intramuscularly by 2-4 ml of 2.5 % solution 2-3 times a day (50-300 mg/day); orally (tablets by 25 and 100 mg) by 50-100 mg 2-3 times a day (all in all 50-300 mg/day).

Clopixol: Clopixol-acuphaz intramuscularly by 1-3 ml (50-150 mg); oral tablets by 2, 10, 25 mg, 6-75 mg/day or more (up to 200 mg); Clopixol depot by 200-400 mg (1-2 ml), 1-2 times a month.

Leponex – see Clozapine.

Librium – see Helenium.

Lyogen – see Moditen.

Lithium carbonate: orally by 0.3 g tablets 1-3 times a day by 1-2 tablets (the dose is selected under the control of the blood lithium level within the range of 0.6-1.2 mM/l).

Lithium oxibutyrate: intramuscularly by 2-4 ml of 20 % solution 1-3 times a day; oral 0.5 g tablets 2-3 times a day by 1-2 tablets (the dose is selected like for lithium carbonate).

Melipramine: intramuscularly by 2 ml of 1.25 % solution 1-3 times a day; oral 25 mg tablets 2-3 times a day by 1-3 tablets.

Melleril – see Sonapax.

Methotrimeprazine – see Tizercine.

Moditen: intramuscularly from 0.5 to 2 ml of 0.25 % solution 1-2 times a day; oral 1, 2.5 and 5 mg tablets, beginning with 1-2 mg 2-3 times a day; the dose should not exceed 30 mg a day.

Moditendepot: intramuscularly from 0.5 to 2 ml of 0.25 % solution 1 time during 1-3 weeks.

Neuleptil: orally in drops in the form of 4 % solution (in 1 g of Neuleptil) after or during meals and drinking by 3-15 drops 2-3 times a day.

Nozepam: orally by 10 mg tablets 2-3 times a day by 1-3 tablets.

Nootropil: orally by 0.4 g capsules 1-4 times a day; intramuscularly or intravenously by 0.5-1.0 g of the drug (an ampoule contains 5 ml of the solution = 1 g) 2-4 times a day.

Olanzapine: orally by 5, 7.5 and 10 mg tablets, 5-20 mg a day.

Periciazine – see Neuleptil.

Pimozide: orally by 1 mg tablets; they are taken only in the morning, beginning with 1 tablet and increasing the dose up to 5 tablets.

Pyrazidol: orally by 25 and 50 mg tablets, beginning with 25 mg 2 times a day, the dose is increased up to 200-400 mg a day.

Pyracetam – see Nootropil.

Relanium – see Seduxen.

Risperidone: orally by 1, 2 mg tablets, 1-8 mg a day.

Seduxen: intramuscularly or slowly intravenously by 2-4 ml of 0.5 % solution 3-4 times a day; orally by 5 mg tablets 2-3 times a day by 1-3 tablets.

Semap: long-acting 20 mg tablets, taken by 1-3 pieces 1 time during 5-7 days.

Sibazon – see Seduxen.

Sidnocarb: orally by 5, 10 and 25 mg tablets in the morning and at daytime.

Sidnophen: orally by 5 mg tablets, 1-2 pieces in the morning and at daytime.

Sonapax: orally in the form of 10 and 25 mg lozenges, by 1-3 pieces 2-3 times a day.

Stelazine – see Trifluoperazine.

Sulpiride – see Eglonil.

Tazepam – see Nozepam.

Tegretol – see Carbamazepine.

Tizercine: intramuscularly by 1-2 ml of 2.5 % solution; oral 25 mg tablets, usually taken before going to bed by 0.5-2 tablets.

Thioridazine – see Sonapax.

Tofranil – see Melipramine.

Triperidol – see Trisedil.

Tryptizol – see Amitriptyline.

Trisedil: intramuscularly by ampoules (1 ml contains 1 mg of the drug) for controlling excitements, from 1 to 5 ml; orally by 0.5 mg tablets and drops in the form of 0.1 % solution (1 drop contains 1 mg of Trisedil) 2-4 times a day at the dose from 0.25 to 2 mg, the daily dose is up to 6 mg.

Trifluoperidol – see Trisedil.

Trifluoperazine: orally by 1, 5 and 10 mg tablets, usually 2-3 times a day by 1-2 tablets (up to 60 mg a day); intramuscularly is seldom used by 1-2 ml of 0.2 % solution 2-4 times a day; the dose may be increased up to 10 mg.

Phenazepam: orally by 0.5 and 1 mg tablets 2-3 times a day by 1-2 tablets for outpatient treatment; the inpatient daily dose may be increased.

Finlepsin – see Carbamazepine.

Fluanxol: orally by 0.5, 1 and 5 mg tablets; small (0.5-3 mg) and moderate (4-15 mg) daily doses.

Fluanxol depot: intramuscularly 20-200 mg 1-2 times a month.

Fluphenazine – see Moditen.

Chlozepil – see Helenium.

Chlorpromazine – see Aminazine.

Chlorprothixene: orally by 15 and 50 mg tablets 2-4 times a day; the daily dose may be gradually increased up to 400 mg; intramuscularly by 1-3 ml of 2.5 % solution for controlling anxiety.

Eglonil: orally by 50 mg capsules by 1-4 pieces 2-4 times a day; its intramuscular use is rare (an ampoule contains 100 mg).

Helenium: orally by 5 mg tablets, 1-2 pieces 2-4 times a day.

Shock treatment. Before the appearance of psychoactive drugs, shock treatment was the basic method for many psychoses, schizophrenia in particular. At present, two kinds of shock treatment exist: electroshock and insulin shock.

Electroshock treatment (EST) was suggested in 1938 by an Italian psychiatrist U. Cherletti and a neurophysiologist L.Bini. Electrodes are applied to the patient's temples, and electric current with the voltage of 60-120 V runs through them during 0.2-0.4 sec. It develops a seizure similar to a grand mal. Such sessions are usually carried out every other day several times. The mechanism of the medical effect is not clear. This method proved to be effective in very severe depressions (when antidepressants fail to help), catatonic stupor and acute hypertoxic (febrile) schizophrenia. EST is also used as a way to overcome therapeutic resistance to psychoactive drugs in chronic mental disorders.

There are several modifications of EST. A session is carried on after *premedication with myorelaxants* (most frequently, diacetylcholine is used): a seizure passes without any convulsions, but with disengagement of consciousness. A respiratory arrest may occur, therefore an artificial respirator is required. The removal of convulsions make it possible to avoid complications in the form of fractures.

Monopolar EST is another modification: the current runs through one cerebral hemisphere, as one electrode is connected to a temple and the other above it, closer to the coronal suture. The convulsions may be significantly weaker, but the efficacy is lower too.

EST complications may be in the form of prolonged respiratory breath-holding after a seizure, a dislocation of the mandible and fractures, particularly fissures of the lower thoracic vertebrae. Sometimes it is possible to observe expressed retrograde and anterograde amnesia for a certain period of time.

EST is to be provided only by the patient's written consent; if he is not able to solve problems concerning his treatment, then his legal representatives' consent is required. A decision about giving EST is taken by a commission of doctors after a thorough somatic examination of the patient.

Insulin shock treatment consists in giving the patient on an empty stomach some individually selected dose of insulin which causes hypoglycaemic coma (or a subcoma state). This state is interrupted by an intravenous injection of glucose. The method was suggested in 1933 by an Austrian psychiatrist M. Zackel. Insulin shocks are caused every day, during 10-30 days. A thorough preliminary somatic examination is required. Different complications are possible. The period of hypoglycaemia may develop fits of convulsions, a collapse-like state, cardiac arrhythmiae. Repeated hypoglycaemiae are possible, especially at night. Chronic infections exacerbate. Sometimes there may be protracted comas, which are not interrupted by glucose.

At present, insulin shock treatment is seldom used. It is most indicated for paranoid schizophrenia which began not more than a year ago. The treatment is to be provided by the patient's or his legal representatives' written consent too.

Other methods of therapy. Psychosurgery still is a field of searching for new methods of treatment. In 1930s-1940s, lobotomy (leukotomy) was common, i.e. cutting of certain nerve routes with a resultant interruption of relations between the frontal lobes. Remote results proved to be unfavourable (severe organic dementia developed). This operation was prohibited in our country, in others they have just discontinued making it. Nowadays attempts are made to use stereotaxic methods. For instance, cingulotomy is suggested for severe persistent annoying thoughts which urge on suicide.

Psychotherapy and social therapy. *Psychotherapy* is treatment by means of influence of psychic factors: words, nonverbal conditional stimulants, situation, certain kinds of work, etc.

Social therapy, by its essence, is a part of psychotherapy which uses sociopsychological factors: influence of the social environment proper, various social (e.g., clubs of former patients) or collective activities. Psychotherapy is used in different fields of medicine. It is of particular importance in such diseases, where a leading part in their development is played by a psychic factor (neuroses and other reactive states, psychosomatic diseases), when the disease itself puts the patient in stress conditions (e.g., pre- and postoperative period) or becomes a severe psychic trauma (e.g., it results in disability). Psychotherapy is the main method of treatment for neuroses, but it is actually used almost in all mental disorders. Peculiarities of psychotherapy in different mental diseases are described in relevant chapters.

Methods of psychotherapy. All the methods of psychotherapy are usually divided into the following basic groups: *suggestive*, *behaviour*, *rational* and *psychoanalytical*. Besides, depending upon the people engaged into psychotherapeutic sessions, psychotherapy may be *individual*, *group* and *family*.

Suggestive methods use suggestion (from Latin *suggestio*) in different forms. The most well known suggestion is in the state of hypnotic sleep. The techniques of hypnotic suggestion are described in special manuals. This method may be used only by a physician who has received some special training in psychotherapy. The word of the suggesting person produces a more potent effect, because in the process of sleep it comes through the only awaking channel for receiving information from outside. But it is only some part of the patients who may submit to the influence of hypnosis. It produces a better effect on those people who suffer from hysterical neurosis and chronic alcoholism. It is impossible to hypnotize the patient without his consent and wish, neither it is possible to force him in the state of hypnosis to make some acts which radically contradict his personality.

Suggestion in the state of narcotic sleep (narcophypnosis), achieved by injections of small doses of hexenal or barbamil, facilitates submersion into the sleepy state and increases hypnoability of some patients.

Suggestion in the state of wakening is achieved by some peremptory, authoritative and confident statements made by the psychotherapist. His widely known reputation, fame of a “healer” increase the effect and broaden the circle of people submitting to his influence.

Suggestive methods are notable for the fact that in some patients, particularly those with hysterical traits of character, they may sometimes produce a rapid

striking effect, but the latter is usually unstable. When the real cause of a disorder is not eradicated, a relapse is inevitable.

Autogenic training (autosuggestion) was suggested by a German psychotherapist I. Schultz in 1920. This is a suggestive method too, but it uses self-suggestion achieved by specially elaborated exercises. At first, the patient is trained to “feel” heaviness, warmth, cold in different parts of his body and then he repeats to himself different “verbal formulae”, convincing himself in achieving a required effect.

Placebo therapy consists in using placebo medicines which by their appearance, smell and taste do not differ from certain drugs (tranquillizers, soporifics, etc.), but really are absolutely indifferent substances. Also employed is the suggestive mechanism, if the patient was told about an expected effect, or the conditioned reflex one, if he has already experienced the effect of this drug before.

Behavior, conditioned reflex methods are based on causing conditioned reflexes. For instance, a conditioned vomiting reflex is caused to the appearance, smell and taste of alcohol by a combination of a small dose of liquor and emetics. Other ways of “teaching” are practiced too. For example, the patient with annoying apprehensions is many times forced to imagine the situation, which causes the fear; as a result, the feeling of fear gradually dies away, it is inhibited.

Rational methods address themselves to the patient’s consciousness, his reason; they are based on logically making the patient change his mind, explaining him the nature of the disorders and ways for their elimination. The psychotherapist’s authority, prestige and knowledge are important for the direct approach (active persuasion of the patient). For indirect approaches, when the psychotherapist and patient act as partners, together assessing the causes of disorders and their possible overcoming, not less important is the physician’s capacity for empathy, i.e. his ability to feel the patient’s sufferings, be imbued with his troubles and anxieties.

On the basis of studying the patient’s personality and peculiarities in the system of his relationships, *pathogenetic personality-oriented (reparative) psychotherapy after Miasishchev-Karvasarsky* tries to reveal psychogenic mechanisms of mental (mainly neurotic) disorders and achieve his realization of the casual relationships between peculiarities of his personality relations and the disorders which have developed. But the matter is not limited by the aim that the patient should only understand the essence of the psychogenesis of his disorders.

The aim consists in restoration of the system of personality relations, lie directions, plans for future, the style of behavior, without which no recovery is possible.

Group psychotherapy means psychotherapeutic sessions simultaneously with several or even many patients (group hypnosis, autosuggestion), as well as sessions where there is active cooperation of the group members. A group discussion may serve as an example, when various problems, situations, individual biographies, behavior and feelings of certain people (including participants in these talks) are jointly discussed. Playing of role functions is another example. One by one, in short scenes members of the group play different parts (a spouse, a parent, a subordinate or chief, etc.) or practice in addressing other people with a request, demand, apologies, with an intention to make it up with somebody with whom they were on bad terms, to meet somebody halfway. Nonverbal group psychotherapy, e.g., psychic gymnastics, is intended for learning how to express one's own and understand somebody else's feelings, wishes and thoughts without words.

Family psychotherapy, as a matter of fact, is a variety of the group one, but the group consists of the family. When neurosis and other reactive states are caused by an intrafamilial conflict, this kind of psychotherapy is directed at normalizing relations in the family and becomes the decisive method of treatment. In different mental diseases, family therapy proves to be useful for strengthening remissions, preventing relapses, raising the level of the patient's social functioning. The family should learn to understand manifestations of a mental disorder make feasible demands of the patient and impel him to do what he is able to.

Psychoanalytical methods are based on doctrines by a famous Austrian psychiatrist, psychologist and neurologist Sigmund Freud. The essence of psychoanalysis consists in extracting suppressed internal conflicts and psychic traumas, which were forced out from the consciousness into the sphere of the subconscious. It was as early as by Freud that an analysis of dreams and a method of free associations were suggested. Dreams are regarded as symbolic manifestations of some repressed, secret wishes and fears. According to Freud, sexual desire (libido) is the leading subconscious force. For instance, any oblong object (a post, tree, walking-stick, etc.) in a dream symbolizes a penis, any hollow (from a cave to an open saucepan) means a vagina. Free associations (the patient is suggested to say aloud everything that comes to his head) make it possible for subconscious complexes to burst through in the form of some unexpected remarks or slips of the tongue. Much therapeutic attention is attached to a "transfer", i.e. a "shift" of the repressed feelings (love, hate, irritation, etc.), had by the patient

towards his parents and other emotionally important people, from him to the psychotherapist. On the other hand, there is a “countertransfer”, when the psychotherapist “shifts” feelings of a parent, spouse, etc., on the patient.

Modern Neo-Freudianism exists in the form of several schools. All of them differ from the “classical” Freudianism by the fact that a larger part in the human psyche is assigned to the consciousness and a smaller one to sexuality. Actually like before, the main attention remains concentrated on the subconscious and sexual. But some of the statements, developed mostly by the psychoanalytical school, have gained rather wide recognition. Among them there is a doctrine about kinds of the psychological defence mechanisms, which include the following ones.

Compensation is an urge for achieving success and prestige in another field, when the person feels his own inferiority in something; e.g., an urge for developing physical strength in case of a mental deficiency.

Hypercompensation (or “supercompensation”) is a craving for success just in the field where one’s own inferiority is felt. Patients with sensitive psychopathy would overcome their shyness and bashfulness, holding the posts which require constant personal contacts. Former drunkards, who have given up drinking, would become militant abstainers.

Denial is a flat refusal to recognize something evident, what seems intolerable or wounding one’s self-respect. In case of a hysterical reaction to a sudden death of a relative, upon whom one’s own well-being depended, this person “would not believe” this relative’s death and behave as if this person were still alive. A person, dying from cancer, does not want to realize that he has a malignant tumour and is ready to attribute his bad state to other causes. Patients ill with alcoholism, despite an expressed dependence upon it, would deny it and persuade other people and themselves, that if they want they are able to give up drinking at any moment.

Rationalization is explanation of what has happened with deliberately invented logical reasons or an attempt to justify one’s behaviour (“I started smoking hashish because it increased my creative abilities, as I had to support the family which was on my hands”).

Conversion means somatic disturbances which as if symbolically reflect unwillingness to reconcile oneself to the situation. For instance, when an opera singer did not receive the part that she had a claim on and instead was given another one which she did not regard as prestigious, she absolutely “lost” her voice and spoke only in a whisper (hysterical aphonia).

Displacement is a transfer of wishes, emotions and thoughts from the primary object, which is unacceptable, to another one substituting for it. For example, for the parents of a narcomaniac the very thought that their son's drug abuse was mainly caused by his incorrect upbringing and intrafamilial conflicts is intolerable, and they put all the blame on a narcotics dispensary, where "he was referred only for an examination, but left it as a narcomaniac".

Dissociation is split personality owing to an intolerable situation. Some hysterical disorders may serve as examples. Thus, residents of some regions of Russia may suffer from an "obsession with an ikotka". This is the name for a specific creature which, as they believe, installs itself in a human being, speaks with his voice, makes great demands of other people, forces to "indulge" it, threatening with a seizure for the person in whom it has installed itself.

Idealization is an evident exaggeration of abilities, services, advantages and any other positive qualities of some person, community, organization or movement, to which this person belongs or upon what he depends. This is particularly characteristic of the conforming type of the character accentuation: idealization of one's surroundings gives an emotional support and justification for one's own behaviour.

Identification is a subconscious imitation of some idol in the behaviour, views, tastes, etc. (if it is done consciously, it is called imitation). This mechanism is particularly important for juveniles as a way of self-affirmation.

Projection is a subconscious transfer of something unacceptable in oneself to other people. For instance, a father would willingly find and be implacable to those negative qualities of his son which he does not want to recognize in himself. One's own shortcomings are transferred to other people ("Everybody drinks" is a common statement made by alcoholics).

Introjection is a mechanism contrary to projection, when something hated or adored outside is transferred to oneself. For example, in the state of dysphoria, instead of aggression towards other people that may cause severe consequences, self-aggression is displayed with resultant self-injuries (usually they are not dangerous).

Regression is a transfer to the infantile level of behaving, reacting and thinking as a way of defence against life adversities; e.g., hysterical puerilism, when in the situations of arrest or court examination, concerning committed offences, people behave like young children.

Sublimation is the state when an instinctive desire, particularly sexual one, cannot be satisfied because of some moral-ethic principles or other restrictions imposed on the people by themselves. With a double energy the patients would strive for some activity, which is socially acceptable and even encouraged. For instance, repressed sexual desires stimulate creation of works of art, inventing, etc.

Substitution is a subconscious replacement of an unachievable or unacceptable aim by another one, which is more achievable and acceptable. For instance, having no opportunity or ability to become an actor, the patient is ready to do any work at the theatre, film studio, etc. The love, undivided by the spouse, is transferred on the children.

“*Undoing*” is an alleviation of some internal tension, restlessness, anxiety by performing rituals, repeating invocations, etc.

The mechanisms of psychological defence may play a double part. In some cases, they form the basis of neurotic disorders and are revealed in the process of psychoanalysis or pathogenetic personality-oriented psychotherapy. In other cases, on the contrary, such mechanisms really play a defensive part (e.g., sublimation) and become strengthened in the process of psychotherapy.

Other psychotherapeutic and social therapeutic methods include *musicotherapy* (a certain emotional state is achieved by listening to specially selected music, choral singing), *bibliotherapy* (reading of specially selected fiction in order to change the mood or, by a similarity between the described situations and events in the patient’s life, to help him find a way out of a difficult situation, to correct his plans, etc.), *play therapy* in children, *art therapy* (artistic creative work, in the process of which the patient may “react” his repressed feelings), and others.

Work therapy is a system of work processes: from the least difficult, distracting from morbid feelings and taking time (therapy with being busy), to training in new professions, if the illness requires it. Work therapy is the most important method of social therapy.

Psychoeducation, psychohygiene, psychoprophylaxis and rehabilitation of mental patients

Psychoeducation – gradually implemented the system of psychotherapeutic influences, providing information to the patient and his relatives about mental disorders and their training in co-ownership with the specific challenges posed by the manifestations of the disease.

The purpose of psychoeducation are:

- formation of patients and their families an adequate idea about the disease;
- reducing emotional stress caused by the fact, and the manifestations of mental illness;
- the decline in patients and their families, and the level stigmatization self-stigmatization;
- getting patients to the role of pharmacotherapy and psychotherapy in the treatment, the possibility of side effects and control;
- education of patients and their families the ability to recognize early signs of worsening disease;
- teaching patients coping skills with the disease;
- correcting distorted social positions disease patients and improve their communication skills;
- increase of compliance;
- providing "psychosocial support"
- improving the quality of life of the patient.

Mental hygiene is a complex of measures for preservation and promotion of mental health, creation of conditions for normal development of the personality and for its optimum functioning.

Mental hygiene studies environmental effects on the human mental health, reveals risk factors of mental disorders on job, in everyday life, public and nature, it determines and organizes ways and methods for their overcoming.

A relation between psychiatry and social hygiene is exercised via mental hygiene. The latter is often connected with psychoprophylaxis, studying such factors as social-psychological, dysadapting and compensating for the psychic sphere.

The modern stage in the development of the society is characterized by a sharp change in the conditions of man's life and higher demands to the state of his health, the level of his physical (biological) and intellectual functions. Typical for

people today is reduction of their adaptive capacities and functional reserves of the organism, disturbances in the mechanisms of self-regulation; it naturally results in a higher morbidity rate of many noninfectious diseases and requires solution of the problems concerning their correction and prevention.

The main task of mental hygiene is to create favourable conditions for an all-round harmonious development and realization of all mental faculties of people (good family, normal nourishment, a good material well-being, favourable living conditions, etc.).

The sections of mental hygiene are systematized with regard for comparative age-specific peculiarities of the psyche. The following aspects of mental hygiene are separated: *mental hygiene of childhood, a child's playing activity, upbringing, education, sexual feeling, youth, work, family, sexual life, marriage.*

The mental hygiene at the preschool age (the period of formation of the personality nucleus) includes:

- 1) keeping of a reasonable regime of day, diet, work, play activities, rest, sleep, etc;
- 2) provision of a normal psychological situation in the family and a children's educational collective, a normal care and demands;
- 3) problems of the family fullness, its well-being (incomplete families, divorces, single mothers, mental stresses, alcoholization, etc.), living conditions (overpopulation, conflicts, early sexual experience, etc.), material welfare, etc.

Particular attention should be paid to the problems of mental hygiene at the school (prejuvenile, juvenile and young) age, since in recent time there is a rise in the mental morbidity rate of this age group.

Unfavourable effects are produced by the following general school problems:

- 1) an inability to cope with academic loads (incorrectness and complexity of syllabi and other demands);
- 2) a teacher's hostile attitude to backward pupils, injustice to all or some pupils with a resultant mutual apathy, etc. (Ushinsky K.D. emphasized, "The school should be the reign of seriousness, allowing a joke, of sweetness without sickliness, of justice without captiousness, of kindness without weakness, of order without pedantry, and, above all, of a constant reasonable activity.");

3) changes of school collectives (a necessity to get adapted to schoolmates and teachers, to the relations which have already been established);

4) rejection by a school collective (complicated emotional relations in a children's collective, significance of sympathies and antipathies, an urge towards leadership and independence, a particular part of streaks of the character, etc.

The following general psychological problems are important:

1) upbringing of psychological sex differences at the preschool and school age (belonging of the certain sex to certain trends in the work and household activities, family orientation, etc.);

2) sex-related physiological and psychological differences at the juvenile and young age (puberty, development of secondary sexual characters, changes in the appearance, difficulties in professional orientation, an urge towards independence, freedom and occupying a corresponding social place, etc.

In order to ensure *mental hygiene of the family*, on which the children's normal development depends to a considerable extent too, very important are the following factors: mutual respect and support; mutual help in household activities; a psychologically rational solution of the conflict situations which appear; involvement of all the members of the family in settling issues concerning important purchases, places for going to rest, etc.; provision of a healthy way of life (without bad habits); bringing up the children (on their parents' own examples) to be modest, honest, industrious, etc.

Mental health is also preserved owing to mental-hygienic measures for ensuring mental and physical work (its rational organization, a regime of work and rest, optimum loads, a favourable psychological climate in the work collective, positive emotional directions for work, an adequate choice of the profession, etc.).

Psychoprophylaxis is a complex of measures for preventing mental disorders and diseases (primary psychoprophylaxis), as well as relapses of the mental diseases suffered before (secondary psychoprophylaxis).

Primary, secondary and tertiary preventions are separated. *The primary prevention* includes prophylaxis of mental diseases in mentally healthy people. This is protection of health in future children, genetic consultations, measures directed at sanitation of women, organization of obstetric aid, an early revealing of developmental defects in newborns, medical-pedagogical correction.

Secondary prevention consists in early diagnosing, early beginning of treatment, use of adequate methods of correction, long-term maintenance drug

therapy of a mental disease, prophylaxis of relapses and a transfer to a chronic course.

Tertiary prevention is a system of measures directed for prophylaxis of disability in patients ill with chronic diseases.

Psychoprophylactic measures are directed at the following things:

1) prevention of psychotraumatizing influences on job and in everyday life (this is the basis for preventing neuroses, psychopathies and some other kinds of psychic pathology);

prevention of iatrogenies and didactogenies;

2) provision of opportune treatment and psychotherapeutic care for somatic patients and convalescents (attention, kindness, etc.);

3) an individual approach in determining job loads after the illness, regulation of the working and living conditions;

4) provision of antirelapse therapy after the illness.

Besides the above listed, a particularly important place in mental prophylactic measures belongs to *the creation of a correct regime of meals and rest, a favourable psychological climate at home, at a medical establishment and on job, a psychotherapeutic training of the whole personnel and their corresponding bedside manners.*

Social-occupational rehabilitation. This is restoration of the person's social status and rights. One of the basic principles of the rehabilitation consists in the unity of biological and social methods of influence. The patient's drug treatment should be combined with consulting and pedagogical work and solving his social problems. Work with the patient should be accompanied by sanitation of his medium, and changes (favourable for the patient) of relationships in his family, on job and in his social activity. The patient himself should be made an active participant interested in the rehabilitative measures, which are to be carried out in consecutive order, with changes in the forms and methods of influencing the patient.

Mental diseases often involve the individual's personality with a resultant break in social relations. Rehabilitation of mental patients, first of all, comes to their resocialization.

It is necessary to preserve the patient's interests at all the stages of the therapy given. Psychiatrists should not only try to make mental disorders in the patient disappear or reduce their intensity, but also take care about creation of his

firm social status after the illness, his adaptation to work, training in new occupational skills. Even at the stage of the tertiary mental prophylaxis it is necessary to encourage the patient's work activity, using his residual capacity for work. One should not be in a hurry to give a disability status to patients even in cases of chronic mental diseases. A more favourable effect on the course and outcome of a disease is produced, if the patient is given an opportunity to remain in his former work collective with a change in his working conditions.

If the patient becomes disabled, it is very important to offer him work at medical industrial workshops, where his life passes in a collective, it contributing to appearance of new emotional and business contacts.

The level of rehabilitation depends upon the attitude to the patient in his family and the situation where he is to return to after the treatment.

The basis of rehabilitative activity is created only after disappearance of acute psychopathological symptoms. The concrete content of rehabilitation depends upon the character of the illness and individual peculiarities of the patients.

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