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Schizophrenia, acute psychotic episode

Методичні вказівки
для підготовки студентів до практичних занять

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Schizophrenia is a chronic mental disease with unclear etiology, which develops on the basis of genetic predisposition and is characterized by changes of the personality in the form of autism, emotional flattening, specific disturbances in thinking, 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", and "*phren*", which means "soul". Thus, the term "schizophrenia" explains the main sing of this illness: a disturbance of the integrity, unity of the mind (mentality) and an inadequacy of mental reaction to external stimulus of surroundings.

The concept of schizophrenia developed in psychiatry gradually. First of scientist, who investigated of schizophrenia, was E. Kraepelin. In 1894 he named it "dementia praecox". Kraepelin considered there are mental illnesses, which have the common process with development special disturbance of intellect in the form of dementia. But In the opinion of many scientists, the term "dementia praecox" is not correct, because not in all the cases schizophrenia connected with dementia. In some cases patients with schizophrenia have good memory and intellect.

In 1911 a Swiss psychiatrist E. Bleuler suggested the term "schizophrenia", which was the most correct in describing the essence of this disease: splitting of mind, splitting of mentality.

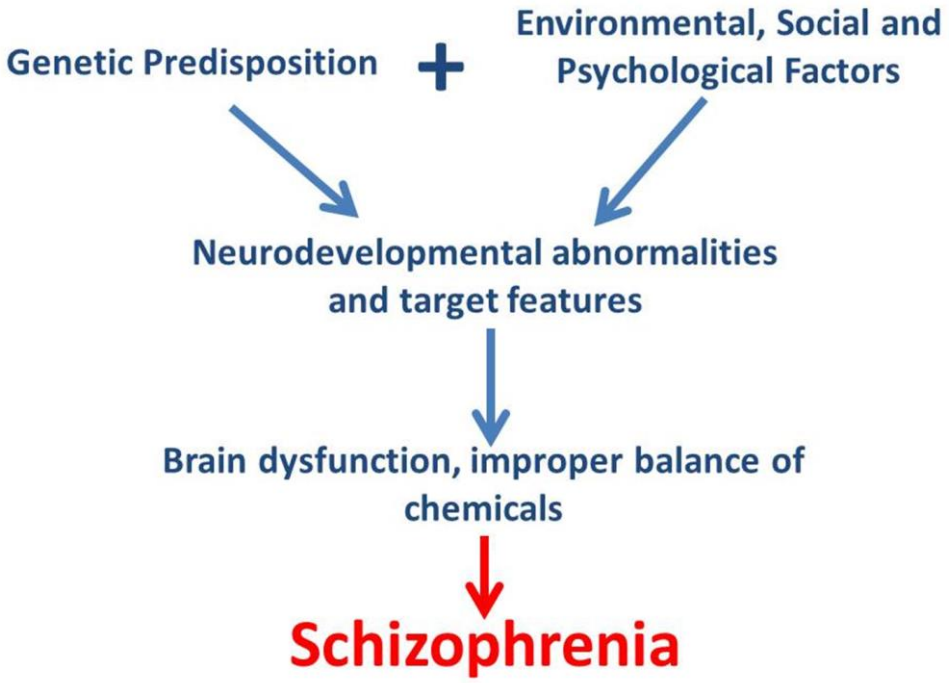
Bleuler maintained, that for the diagnosis of schizophrenia are most important the following four fundamental symptoms: affective blunting, disturbance of association (fragmented thinking), autism, ambivalence (fragmented emotional response). These groups of symptoms, are called „four A' s" and Bleuler thought, that they are „primary" for this diagnosis. The other known symptoms, hallucinations, delusions, which are appearing in schizophrenia very often also, he used to call as a "secondary symptoms", because they could be seen in any other psychotic disease, which are caused by quite different factors – from intoxication to infection or other disease entities.

The prevalence of schizophrenia among the population is about 10 cases in 1,000 people, which keep stable in different countries and in different times. The World Health Organization (WHO) estimates that about 24 million people worldwide suffer from schizophrenia.

The first manifestations of the illness are observed at the young age. It seldom happens in people over 30. It is from 15 to 25 years old period. Men have a slightly higher risk of developing schizophrenia than women and tend to develop the disorder at an earlier age. The disorder typically begins in women between age 25 and the mid-30s and in men between ages 18 and 25. Women tend to have a higher level of functioning before the onset of the disorder and to have a less severe course of illness than men. Men with schizophrenia tend to have more cognitive impairment, greater behavioral deficits, and a poorer response to drug therapy than women with the disorder.

***Etiology and pathogenesis*.** Despite much research scientists still have not pinpointed the precise cause of schizophrenia. According to modern concepts, schizophrenia belongs to a group of genetic predisposed diseases, which origin is multifactorial. A risk of the child to fall ill in case if one of the parents suffers from schizophrenia is 16.4 %, if both parents are ill this risk increase to 68.1 %. But the genetic essence and the type of inheritance still remain not quite clear. It is considered that the role of the hereditary factor is in transmitting a peculiar predisposition, which under certain conditions is realized into a morbid process.

What is mean genetic predisposition? It is mean that the patient has some genetic breakage or feature that is passed from parents to children which can manifest only in certain conditions. In cases of favorable conditions, this genetic predisposition does not manifest in clinical symptoms as a disease. But In cases of stress, somatic illness or other unfavorable (adverse) factors genetic predisposition is manifested in the clinical form of the disease. That way, patient has basis of disease in his genetic code, but this morbidity bases can manifest only in unfavorable conditions. So, patient with hereditary predisposition has genetic risk of development schizophrenia.



An important part in the manifestation of the illness is played by the environmental effect (exogenous factors), as well as by general biological shifts in connection with somatic diseases and endocrine age-specific peculiarities. Some somatic and infectious diseases, brain injuries and psychic traumas may be provoking factors and followed by the manifestation of the illness. Along with these factors, the residual-organic cerebral insufficiency, caused by an unfavourable course of the pregnancy and delivery and diseases of the 1st year of age, is also of some importance in the etiology of schizophrenia.

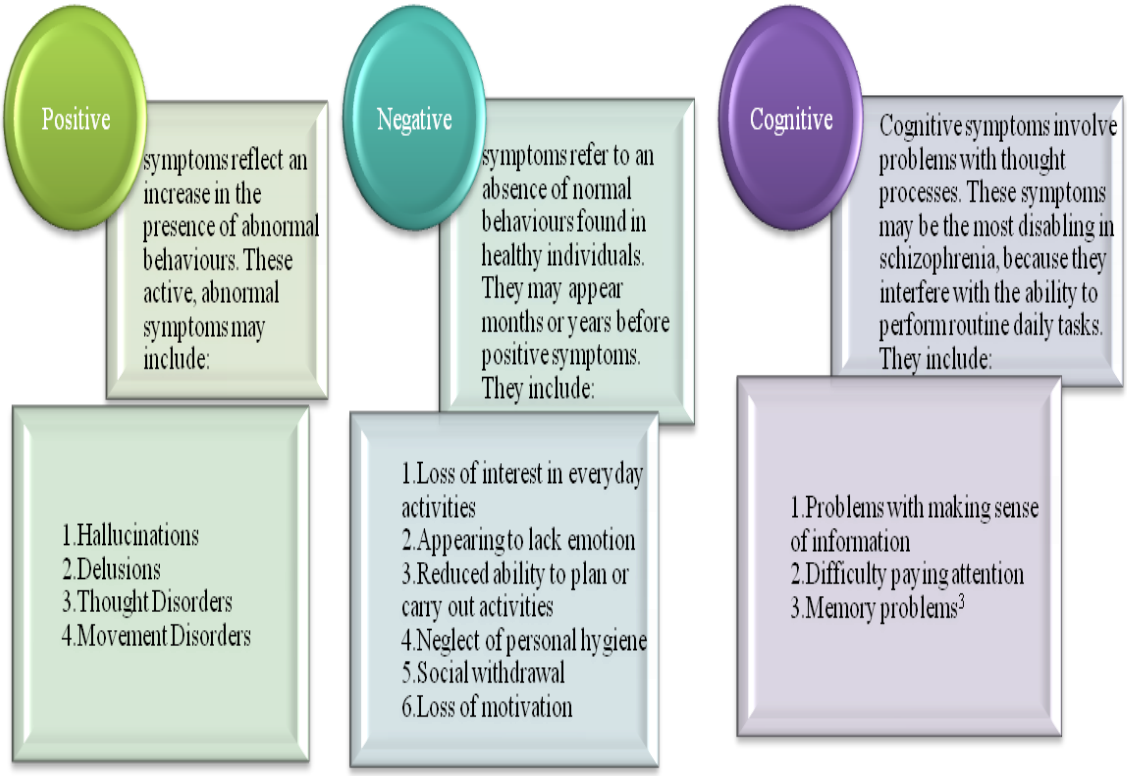
Pathophysiological studies show that patients with schizophrenia have specific changes in the structure and function of the brain. The brains of people with schizophrenia have abnormal production or reaction to the important chemical neurotransmitter dopamine, norepinephric, serotonergic, glutamatergic and others. Classical dopamine hypothesis of schizophrenia says that psychotic symptoms are related to dopaminergic hyperactivity in the brain. Hyperactivity of dopaminergic systems during schizophrenia is result of increased production dopamine and increased sensitivity and density of dopamine D2 receptors in the different parts of the brain. It is confirmed the effects of antipsychotic drugs that have in common the ability to inhibit the dopaminergic system by blocking action of dopamine in

the brain and dopamine-releasing drugs (amphetamine, LSD) that can induce state closely resembling paranoid schizophrenia. But not only dopaminergic system plays a role in the pathogenesis of schizophrenia. Various neurotransmitter systems probably takes place in the etiology of schizophrenia (norepinephric, serotonergic, glutamatergic, some peptidergic systems), that confirmed effects of atypical antipsychotics especially.

Numerous brain abnormalities have been found in schizophrenia. For example, patients often have enlarged cranial ventricles (cavities in the brain that transport cerebrospinal fluid), especially the third ventricle, decreased brain volume in medial temporal areas, changes in the hippocampus. There is also some evidence that at least some people with schizophrenia have unusual cortical laterality, with dysfunction localizing to the left hemisphere.

The anatomical abnormalities found in different parts of the brain tend to correlate with schizophrenia's positive symptoms and negative symptoms. Positive symptoms are often linked to temporal lobe dysfunction, as shown by imaging studies that utilize blood flow and glucose metabolism. Such dysfunction possibly is related to abnormal phospholipid metabolism. Disorganized speech (taken to reflect disorganized thinking) has been associated with abnormalities in brain regions associated with speech regulation. Negative and cognitive symptoms, especially those related to volition (desire) and planning, are commonly associated with prefrontal lobe dysfunction. Thus, schizophrenia develops as a result of interaction of genetic and environmental factors. But the mechanisms of interaction of these factors, as well as their relative role in the origination and manifestation of different forms of the illness have not been clarified yet.

Clinical manifestation of schizophrenia. The cardinal mental disorder in schizophrenia consists in a split of mental activity with a resultant loss of the inner integrity of the intellectual, emotional and volitional functions, as well as the unity of the personality with the environment. The symptoms of schizophrenia can be divided into three groups.



First of all it is Negative (basic, permanent) symptoms, which typical for all the forms of the illness, like autism, emotional flattening, reduced mental activity, decrease volitional activity and additional (secondary, "productive" symptoms), typical for some or another form of schizophrenia, not for all form, like hallucinations, delusion, cenesthopathies. Also determine the cognitive symptoms, which are characterized by disturbances of cognitive sphere.

Autism is disconnection of the personality from the environment, loss of contacts with other people, shutting oneself off, self-reservation, absorption into patient`s own world, themselves feelings. The patient becomes silent, avoids any contacts with other people, because he feels better alone. In conversation they don't see in eyes in other people. Even with the relatives, the verbal contact and relationship becomes formal, poor. They become aggressive, when other people try intrude in their world or return his to reality life.

Emotional disorders are become apparent in a gradual impoverishment of emotional reactions. 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 his fate.

Against a background of a significant emotional flattening, we can see in our patient some inadequacy of emotional reactions. For example, the patient would laugh in an improper situation. They would smile when talk about sad events. As a result of the splitting process in the emotional sphere, the schizophrenia patient can combine two opposite feelings at one moment: he loves and hate, he is angry and happy, cheerful and depressed at same time It is ambivalent of emotions. The patients' mimics does not correspond to their feelings or absolutely absent, it is demonstrates a splitting of their integral emotional reactions.

The style of dressing often changes too. Some patients become untidy, careless, while others begin wearing very unusual and flashy clothes, losing even elementary tact and taste.

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, compression of concepts. A disposition to futile judgements, 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), 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 by a reduction in the purposeful activity (hypobulia and abulia), a morbid decrease or an absolute absence of any motive for activity. 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. As a result, there are increasing problems in studies, professional degradation. They leave off look after themselves, very often they wearing unclean clothes, don't carry out every day hygienic procedures, don't wash, don't brush their teeth.

Splitting of the mind is reflected by the patients’ behaviour. A purposeful activity is always affected. Typical for the patients is their strange behaviour, absence of usual logic motives. A sensation of estrangement of their own thoughts, feelings and actions is a peculiar kind of the activity disorder.

Patient feels that part of his mental activity is not belonging to him, taking place independently of his will, automatically. When Patient think, that something or somebody control his thought, emotions, activity, they think, that in their brain there are strange ideas. (Kandinsky-Clérambault syndrome). Depersonalization symptom develops: a feeling of splitting of his own personality, Patient believes that his personality changed. The patient feels two personalities inside him, says about himself in the third person, “he wants to eat, he went”, and uses various family and first names for himself.

Hallucinations and delusional thinking are severe symptoms very commonly experienced by those who suffer from schizophrenia. Some commonly expressed hallucinations and delusions by people with schizophrenia. Patients think: «The government was watching me with planted video cameras, I at times thought that aliens were communicating with me through street lights, I heard voices and could not sleep at night, The voice told me to kill myself in a slow painful way, My thoughts seemed to broadcast through the radio». More Typical for schizophrenia

is verbal pseudohallucinations, which connect with delusion persecution, influence, control of magic, connection with space.

The symptoms suffered by a person with schizophrenia can be very debilitating. Schizophrenia can have severe negative effects on ones everyday life. These symptoms can effect a persons relationships, employment, finances, schooling, and overall enjoyment of life. One can only try and imagine how fearful and terrifying it must be to hear voices, believe that others are plotting to harm you or are trying to control your mind.

The diagnosis of schizophrenia is a difficult and complex process including mental status examination, physical and neurological examination, complete family and social history (take in consideration family history of response to drugs), psychiatric diagnostic interview, laboratory work up.

There are 2 main diagnostic manual ICD-10 and DSM-IV.

According to modern ICD-10 classification for the diagnosis of schizophrenia is necessary presence of one very clear symptom - from point a) to d) or the presence of the symptoms from at least two groups - from point e) to i) for one month or more:

a) the hearing of own thoughts, the feelings of thought withdrawal, thought insertion, or thought broadcasting
b) the delusions of control, outside manipulation and influence, or the feelings of passivity, which are connected with the movements of the body or extremities, specific thoughts, acting or feelings, delusional perception
c) hallucinated voices, which are commenting permanently the behavior of the patient or they talk about him between themselves, or the other types of hallucinatory voices, coming from different parts of body
d) permanent delusions of different kind, which are inappropriate and unacceptable in given culture
e) the lasting hallucination of every form
f) blocks or intrusion of thoughts into the flow of thinking and resulting incoherence and irrelevance of speech, or neologisms

g) catatonic behavior

h) „the negative symptoms", for instance the expressed apathy, poor speech, blunting and inappropriateness of emotional reactions

i) expressed and conspicuous qualitative changes in patient's behavior, the loss of interests, hobbies, aimlessness, inactivity, the loss of relations to others and social withdrawal

According to DSM–IV classification schizophrenia is characterized by:

A. Characteristic symptoms. At least 2 of the following; each for 1- month period delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms, i.e. avolition, flattening of affect, alogia (poverty of speech)

B. Social/occupational dysfunction

C. Continuous signs of the disturbance persists for at least six months

D. Schizoaffective and mood disorder exclusion

E. Substance/medical condition exclusion

F. Relationship to pervasive developmental disorder: the additional diagnosis of Schizophrenia is made only if prominent delusions or hallucinations are also present for at least a month.

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 (Paranoid, Hebephrenic, Catatonic, Simple form of schizophrenia)

Paranoid is the most prevalent 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. Acute manifestations of Schizophrenia begin with the appearance of insomnia, anxiety, nervousness, irritability. 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, influence, 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, talks about him. The delusions are accompanied by verbal hallucinations and illusions: “they talk about me”, the patients hear somebody calling their names, “voices”. Often paranoid schizophrenia develops Kandinsky-Clérambault syndrome: a combination of psychic automatisms, pseudohallucinations and delusions of affection, estrangement of his thoughts, actions and personality.

In compliance with the contents of the delusions and hallucinations, the patient’s behaviour changes. He can be dangerous for both himself and other people. Under the influence of imperative hallucinations the patient would refuse taking food, medicine, do suicide or be aggressive to other people, kill somebody. Very often the patients would dissimulate their feelings, they don’t want to talk about his symptoms, most of them don’t understand that it is mental illness, they don’t want to take treatment, they refuse from hospitalization and treatment on psychiatric hospital.

Hebephrenic is the most malignant form of schizophrenia, which begins at the juvenile or young age. This form is characterized by senseless foolish behaviour, 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, 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.

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 unfavourable prognosis and usually rapidly (during 1-2 years) results in disintegration of the personality and dementia.

Catatonic form 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, 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 noncontinuous 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, 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 is manifestation of the basic negative symptoms of schizophrenia: autism, a reduced of volitional activity, affective bluntness and disturbances of thinking. Combination of these symptoms makes the apathoabulic syndrome. The illness begins gradually, more frequently in children and young people. The patients begin studying bad and missing classes, spend a larger part of the day in bed, become still more silent, emotional flattening and lose social relations and friends. The lose any interest in their clothes and their appearance, become untidy, do not wash themselves, do not change their clothes, sleep with their clothes on. As a rule, the patients don't have any plans and wishes, but it does not upset them.

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 judgements (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 unfavourable, because the simple form is diagnosed late and the patients are admitted to hospital already having signs of the defect formed.

According to ICD-10 classification determines acute and transitory psychotic disorders. The onset of psychotic states is acute, from 48 hours to 2

weeks; the more acute the onset, the more favourable the prognosis. The clinical picture is characterized by delusions, hallucinations, excitement, non-continuous thinking. If the morbid state lasts less than 1 month and schizophrenic symptoms appear only in the beginning of an episode and for a short period of time, the state is encoded as an acute polymorphous psychotic disorder without symptoms of schizophrenia. If schizophrenic symptoms are observed longer, but not more than 1 month, the state is encoded as an acute polymorphous psychotic disorder with symptoms of schizophrenia. If the state is stable and not polymorphous, but symptoms of schizophrenia persist less than 1 month, the episode is encoded as an acute schizophrenia-like psychotic disorder.

Transitory psychotic disorders may end with a practically full recovery, a complete restoration of the capacity for work and socialization. In some cases they relapse, sometimes with a subsequent manifestation of schizophrenia or manic-depressive psychosis. Isolation of this item is aimed at making the diagnostic limits of schizophrenia and affective psychoses narrower.

Development of the disease in the early stages characterized by prodromal signs, including behavioral changes, the patient becomes quiet, passive or irritable, few friendships, avoids social activities, appear daydreams, somatic complaints, interest in the occult, religion, or philosophy.

The development of schizophrenia is characterized by a gradual onset and includes 3 stages: prodromal phase, active phase, residual phase.

Prodromal phase in schizophrenia, is the period of decline in functioning that precedes the first acute psychotic episode. Acute episode of schizophrenia are characterized by delusions, hallucinations, illogical thinking, incoherent speech, and bizarre behavior. Residual phase in schizophrenia, is the phase that follows an acute phase, characterized by a return to the level of functioning of the prodromal phase.

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 unfavourable (hebephrenic, hallucinatory-paranoid, schizophasic) 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-apathetic 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.

Treatment of schizophrenia. Treatment of schizophrenia, like all mental illnesses is characterized by a complex and includes the following areas:

a) psychopharmacotherapy with antipsychotics (neuroleptics), risperidone, amisulpride, olanzapine, chlorpromazine, haloperidol, and if necessary, use other psychotropic drugs (antidepressants, mood stabilizers, tranquilizers); and other methods of treatment which are directed at the normalization of the somatic sphere, vascular, neurodynamic processes.

b) psychotherapy in complex treatment and rehabilitation;

c) social rehabilitation, which is aimed at adapting the patients to the social life, making (creating) sustainable living conditions.

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.

Psychopharmacotherapy now become the main method of treatment schizophrenia worldwide, which is effective for the relief of acute attacks of the disease and for the treatment of chronic forms of the disease without remission, as well as for maintenance therapy and prevention of attacks of illness.

Therapy with psychoactive drugs is the basic method of treatment. Antipsychotic medication is often very successful in treating schizophrenia. Antipsychotics have an affect on the brains dopamine and serotonin neurotransmitters which helps to normalize the chemical imbalance and relieve the most troubling schizophrenia symptoms.

Arsenal of neuroleptics has more than fifty different compounds. With all antipsychotics have several properties that unite them into one group. They are able to treat the main manifestations of psychosis (delusions, hallucinations), cause deferred response without mandatory hypnotic effect or suppression of intellectual functions, smooth emotional reactions, including anxiolytic effects (rapid relief of pathological anxiety), decrease the aggressiveness (depression of psychomotor activity). The mechanism of action of antipsychotics is associated with inhibition of dopaminergic and adrenergic receptors in the central interneuronal synapses.

Effect on these systems is predetermined and other effects neuroleptics (anticonvulsive, muscle relaxant, hypothermia, hypotension, antiemetic, etc.), including side effects (extrapyramidal disorders).

Recently, widespread separation of antipsychotics on both typical and atypical. This classification is based on differences in their clinical effects (ability to cause neurological disorders and effect negative symptoms) and the profile of biochemical activity. Typical antipsychotics (Haloperidol, Chlorobromazine, Zuclopenthixol) are dopamine's receptor blocker that lead to particularly effective against positive symptoms, significant improvement is seen in 70% of patients. It also has activity on histamine, muscarinic and α-receptors, which responsible for the side effects.

Atypical antipsychotics in the case of usual clinical doses do not lead to the development of extrapyramidal side effects. Feature of atypical antipsychotics (Clozapine, Olanzapine, Resperidone) is less pronounced affinity to dopamine D2-receptor, blockade which leads to the development of extrapyramidal disorders. More pronounced relationship with D1- receptors, providing relief of positive symptoms, and serotonin 5HT2 receptors, impact of which is probably the reason for the effectiveness against negative and cognition symptoms in patients with schizophrenia.

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. For the paranoid form of schizophrenia with an expressed psychomotor excitement, the feeling of fear and nervousness, neuroleptics with the sedative, inhibiting effect are indicated: aminazine, propazine, tizercine, chlorprothixene; the above neuroleptics are indicated for catatonic and hebephrenic excitement. Antipsychotic effect is produced by haloperidol, trifluoperazine, trisedil, rispolept and clopixol which are used in the paranoid form with Kandinsky-Clérambault syndrome. In case of complex psychopathological syndromes (depressive-paranoid, manic-paranoid) requires a

combination of psychoactive drugs, including antipsychotics, antidepressants, and other means.

Long-term experience of applications neuroleptics showed that the best results were achieved in patients who took the drug continuously. Modern antipsychotic drugs in schizophrenia are not only symptomatic but also pathogenetic influence on the disease. So taking antipsychotics should be continued even after the main manifestations of psychosis completely disappeared. Waiver of maintenance therapy increases the risk exacerbation of illness and can lead to significant impairment of the mental state of the patient.

It is important to maintain a balance between the level of estimated advantage and risk of side effects of treatment. Antipsychotic therapy is often accompanied by the development of various mental, neurological and physical side effects that significantly decrease the quality of life for patients, increase stigma and become a cause of a violation of medical advice.

Range of side effects of neuroleptics depends on the biochemical mechanisms of action. Most adverse reactions associated with blockade receptor neurotransmitter systems of the brain and autonomic nervous system. Profile of side effects is similar to many neuroleptics. Specifically, the most of traditional antipsychotic often lead to the development of neurological disorders - extrapyramidal syndrome, drug Parkinsonism, which manifests general muscle stiffness, tremor, spasm of separate muscles, restlessness, hyperkinesis. To prevent these disorders, patients are administered antiparkinsonian drug, benzodiazepine tranquilizers, dimedrol and nootropics. In addition to typical antipsychotics characterized sedation, anticholinergic side effects, orthostatic hypotension and other. Treatment of atypical antipsychotics often leads to metabolic imbalance (increased prolactin, weight gain, hyperlipidemia, impaired glucose tolerance, insulin resistance).

During antipsychotic therapy the most dangerous are the cases cardiac arrhythmias, agranulocytosis and neuroleptic malignant syndrome. At the slightest suspicion these complications neuroleptic treatment should be withdrawn. Other

side effects (including extrapyramidal) should be promptly identified and corrected. This is important not only to improve the quality of life for patients, but also to maintain optimal relations between doctor and patient and maintain the confidence of the patient to therapy.

Taken into consideration the need for long-term use of antipsychotic drugs in some patients with poor adherence to treatment, as an alternative to oral antipsychotics during maintenance therapy can be used by their long-action form (moditen-depot, haloperidol-decanoate, clopixol-depot, fluanxol-depot). Therapeutic effect the most of long-term use antipsychotic drugs begins to manifest itself in just a few days after the injection and continued from 2 to 4 weeks to allow for easy treatment regimens because of a rare drug administration; to facilitate control over compliance with the treatment regimen; reduce stigma patients due to lack of necessary daily medication.

Schizophrenics can be treated both as in- and outpatients. Urgent hospitalization without the patient's consent (in case when owing to his mental state the patient is unaware of his actions and unable to direct them, without the consent of his relatives or the people substituting for them) is indicated, if the patient has delusions, hallucinations, morbid anxiety, fear, confusion, suicidal thoughts and intentions, on which his behaviour depends. The feelings, which lost their actualization and do not produce any effect on the patient's behaviour, do not belong to such indications, unlike hebephrenic, catatonic and maniac excitement, expressed depression with suicidal thoughts, stupor with refusal to eat, aggression with a risk of inflicting severe injuries or making destructive actions. If hospitalization is desirable in order to specify the diagnosis or select the most effective drugs, it can be done only by the patient's consent. But if owing to his illness he is not able to take a decision, it is necessary to have a consent of his relatives or the people substituting for them. If being cared by his relatives the patient is not dangerous for either himself or other people nearby, it is desirable to treat him at day hospitals or as an outpatient, in touch with his family.

Schizophrenics often have problems with daily living skills, relationships, communication skills and motivation. For these reasons it is almost imperative that schizophrenics get some type of psychosocial assistance. Sessions with psychologists or psychiatrists are very important to these patients' social growth. This is even more so important since the majority of cases begin at the early teen ages when social growth is so important.

Psychosocial interventions include 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 and consist of social skill training, employment training, cognitive remediation therapy, psychoeducation, family therapy, psychotherapies. A complex of psychosocial measures is conducted at all the stages of treatment. Numerous studies have found that psychosocial treatments can help patients who are already stabilized on antipsychotic medications deal with certain aspects of schizophrenia, such as difficulty with communication, motivation, self-care, work, and establishing and maintaining relationships with others. Learning and using coping mechanisms to address these problems allows people with schizophrenia to attend school, work, and socialize. Patients who receive regular psychosocial treatment also adhere better to their medication schedule and have fewer relapses and hospitalizations.

Psychotherapy is included in the complex of medical measures after the patient returns from his acute psychotic state. The kind and contents of the psychotherapeutic influence depend upon the patient's psychotic state, the contents of his feelings, the form and stage of the disease. Rational, interpersonal therapy directed at creation and preservation of social skills and family psychotherapy accentuating creation of a positive emotional climate in the family are used. Cognitive behavioral therapy is useful for patients with symptoms that persist even when they take medication. The cognitive therapist teaches people with schizophrenia how to test the reality of their thoughts and perceptions, how to "not listen" to their voices, and how to shake off the apathy that often immobilizes them. This treatment appears to be effective in reducing the severity of symptoms

and decreasing the risk of relapse. Important is the use of group psychotherapy and develop communication skills.

People with schizophrenia can take an active role in managing their own illness. Once they learn basic facts about schizophrenia and the principles of schizophrenia treatment, they can make informed decisions about their care. If they are taught how to monitor the early warning signs of relapse and make a plan to respond to these signs, they can learn to prevent relapses. Patients can also be taught more effective coping skills to deal with persistent symptoms.

Cognitive remediation is a treatment modality derived from principles of neuropsychological rehabilitation. It is based, in part, on the ideas that the brain has some plasticity and that brain exercises can encourage neurons to grow and can develop the neurocircuitry underlying many mental activities.

Family intervention schizophrenia affects the person's whole family, and the family's responses can affect the trajectory of the person's illness. Some studies have found that family therapy or family interventions may prevent relapse, reduce hospital admission, and improve medication compliance. Patients with schizophrenia are often discharged from the hospital into the care of their families, so it is important that family members know as much as possible about the disease to prevent relapses. Family members should be able to use different kinds of treatment adherence programs and have an arsenal of coping strategies and problem-solving skills to manage their ill relative effectively.

Most patients with schizophrenia would like to work; employment can improve income, self-esteem, and social status. However, few people with the disorder are able to maintain competitive employment. Supported employment programs currently thought to be most effective are those that offer individualized, supported, and rapid job assignments and that are integrated with other services.

***Prognosis*.** Schizophrenia is a progressive disease with a resultant mental defect. Active therapy cannot finally change this assessment yet, but at the same time now the percentage of favourable outcomes is markedly increasing. The clinical and social prognoses proceed from consideration of the degree of

expressiveness and rate of the development of the defect, a possibility of social (family, labour) adaptation. A better prognosis is made in a paroxysmal course of the disease, and a worse one if the course is continuous. In case of the paranoid (continuous) form with Kandinsky-Clérambault syndrome, the prognosis is much worse: about 50 % of the patients reveal terminal defect states. Even a more unfavourable prognosis is made in continuous hebephrenia. The prognosis for slightly progredient schizophrenia is better. Hereditary predisposition, presence of organically changed grounds (residual organics), stable verbal hallucinosis, olfactory hallucinations, body weight gaining without any improvement of the mental state are prognostically unfavourable signs.

With respect to life, the prognosis is favourable. Lethal outcomes are practically possible only in febrile schizophrenia. Suicides occur in cases of imperative auditory hallucinations and depressive states (postschizophrenic depression, schizoaffective psychoses).

How do people live with schizophrenia? Many people diagnosed with schizophrenia are still able to live normal, happy lives. For those diagnosed with the disorder, it is very important that they continue to take their medication and abstain from drugs and drinking. One man diagnosed with schizophrenia presents this optimistic picture of living with his disorder. He said: «Those early years when you are first diagnosed are very hard. Many people are very surprised by the illness and don't know what to do. Many refuse medicines. But as time goes on, most people learn what works. They find their best medication. They find a way to live that is satisfying and doesn't stress them too much. They learn not to drink too much alcohol, and to take care of themselves. The find a good doctor, and often others help them, such as friends, priest, or counselor. People make a decent life for themselves. They find love, they find work....it gets better. The key is to stick with the medication and to never give up…».

Among people with schizophrenia there are famous people: John Nash – Nobel Prize winner, Syd Barret – guitarist for Pink Floyd, Mary Todd Lincoln –

wife of Abraham Lincoln. John Nash, a US mathematician, began showing signs of paranoid schizophrenia during his college years. Despite having stopped taking his prescribed medication, Nash continued his studies and was awarded the Nobel Prize in 1994. His life was depicted in the 2001 film A Beautiful Mind.

Навчальне видання

Шизофренія. Первинний психотичний епізод

Методичні вказівки для підготовки студентів до практичних занять
(на англійській мові)

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