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AND PROSPECTS**



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Editor

Komarytsky M.L.

Ph.D. in Economics, Associate Professor

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e-mail: munich@sci-conf.com.ua

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PSYCHOGENIC DYSMENORRHEA – STRESS – DEPENDENT WARTIME SYNDROME

Shcherbina Iryna Mykolaivna,
Mertsalova Olga Vladislavivna,
Doctor of Medical Sciences,
Professor,
Strakhovetska Maryna Vitaliivna,
Student,
Kharkiv National Medical University

Introduction. Menstrual dysfunction in the form of dysmenorrhea in women of reproductive age is increasingly spreading in the modern world.

Primary dysmenorrhea is not related with organic disorders and is caused by the peculiarities of the body's neurohumoral response to various stress factors.

Unlike secondary dysmenorrhea, both congenital and acquired, which is a manifestation of a disease of the reproductive system.

In terms of the genesis of primary dysmenorrhea, there is a classification that reveals its origin: spasmodic dysmenorrhea associated with excessive prostaglandin production, essential dysmenorrhea, which is associated with a lower pain threshold and psychogenic dysmenorrhea, which often develops in women with a sensitive psychotype.

It is stress that affects the development of an entire mechanism of consistent disorders of neuroendocrine regulation.

Psychogenic dysmenorrhea occurs as a result of these disorders.

Responding to the signals of an external threat, the stressful action begins to be realized at the level of the central nervous system with the participation of the paraventricular nuclei of the hypothalamus. Secretion and emission into the bloodstream of corticotropin-releasing hormone (CRH) and arginine-vasopressin (AVP) lead to the release of adrenocorticotropin (ACTH) from the pituitary gland, followed by stimulation of cortisol production in the adrenal cortex.

Thus, a tissue reaction to stress and a response cessation of the stress reaction

are realized.

In the human body, there is one more chain of stress response, in other words, an extrahypothalamic system of responses to the stress factor.

The amygdala of the brain is an area responsible for the emotional state and the response and control of emotions. The production of CRH also occurs there, but its function is to behave under stress and to influence the sympathetic nervous system. A number of neurotransmitters such as norepinephrine, serotonin, gamma aminobutyric acid (GABA), glutamate affect the secretion of CRH.

Thus, all these substances tend to affect mental functions, behavior, psychosomatic symptoms, the menstrual cycle as well.

Their transneuronal action and stimulation of gonadotropin-inhibiting hormone (GIH) leads to a decrease in the emission of gonadotropin-releasing hormone (GRH) and a decrease in the secretion of gonadotropins.

A partial consequence of these processes may be a violation of the synthesis of sex steroids with a simultaneous increase in the level of cortisol.

Instant stress or periodic stress in general end with a physiological reaction and most often passes without consequences.

At the same time, constant stress has significant consequences, sometimes leading to severe and incurable diseases.

Aim. The aim of the research is to investigate and analyze the condition of women with psychogenic dysmenorrhea under conditions of chronic stress of martial law. Also to develop directions for treatment and prevent subsequent complications and irreversible consequences of this syndrome.

Materials and methods. The study included 56 patients of reproductive age with symptoms of psychogenic dysmenorrhea without any organic gynecological pathology.

Control group were 26 healthy women of reproductive age.

Found out: complaints, anamnestic data, the presence of psychogenic factors and their types, features and duration.

Physical examination, general clinical tests as blood and urine tests,

instrumental studies such as blood pressure measurements, electrocardiogram, ultrasound of internal organs were performed.

Gynecological examination (to exclude organic pathology) included colposcopy, cytological and microbiological tests, ultrasound of the pelvic organs.

Special research methods were studies of blood hormones CRH, ACTH, cortisol, serotonin, LH, FSH, LTH, estradiol, progesterone, testosterone. These studies were carried out by the method immunochemiluminescent method with the "immulite" analyzer.

Results and discussions. Complaints of patients of the main group at the beginning of the study consisted of intense pain during menstruation, the appearance of pain on the day of menstruation or one or two days before it.

Pain first began to manifest over the past 8 to 12 months.

It was found that the pain had a cyclical nature, was clearly associated with the menstrual cycle. The pain was localized in the lower abdomen (50%), irradiated to the lumbar area (46.4%), irradiated to the groin area (62.5%). 17.8% of patients had occasional dizziness, 33.9% of patients had migraine-like headaches.

83.9% of patients noticed mood changes, irritability, depression, unexplained weakness and decreased appetite in the hours preceding the onset of pain.

The feeling of anxiety and fear appeared approximately two or three days before menstruation and intensified with its onset. 10.7% of patients indicated diarrhea on the first or second day of menstruation. The duration, frequency, regularity of the menstrual cycle as well as the volume of menstrual blood had a physiological character. All patients in the anamnesis vitae did not have a pain syndrome associated with menstruation or noted insignificant discomfort that did not disturb the usual rhythm of life and did not require medication correction. Patients denied a history of mental disorders.

91.1% of patients took analgesic and antispasmodic drugs for several menstrual cycles. 35.7% of them were taking prostaglandin synthetase inhibitors at the onset of pain, which are known to be the drugs of choice in the treatment of primary dysmenorrhea. There was no significant positive effect, which indicates in favor of

psychogenic dysmenorrhea. Also in favor of this diagnosis is the fact of the recent (less than one year) appearance of peculiar complaints in patients who have not previously suffered from this disease. Stress present in one or another form in all examined patients can be defined as chronic. A sense of fear for the own life and the lives of loved ones, uncertainty and expectation of danger, anxiety, problems in the family and at work, changes in comfort and quality of life, probably led to the appearance of psychogenic dysmenorrhea syndrome. A general examination of the patients revealed that 42.8% of the women were normosthenic, 35.7% were asthenics, 21.5% were hypersthenics. Body weight was within the framework of the physiological growth-weight coefficient.

In 30.4% of patients during the initial examination, changes in the ECG were noted in the form of tachycardia of 80-100 beats per minute. Clinical blood and urine tests were within the physiological norm.

A gynecological examination did not reveal any serious pathologies in the reproductive organs. 12.5% of patients were diagnosed with colpitis of nonspecific etiology, and after sanitation, these patients were included in the main group.

The primary gynecological examination was carried out in the late luteal phase, that is, on the eve of the onset of symptoms of dysmenorrhea, increased nervousness and irritability to external factors.

The content of ACTH was 40-52 pg/ml in the main group if to compare to 11-38 pg/ml in the group of healthy women.

The results obtained in both groups were within the physiological norm, but there was an obvious deviation towards the upper limit of the norm in patients of the main group. A similar situation is typical for the level of CRH in patients with psychogenic dysmenorrhea. Namely, in patients with psychogenic dysmenorrhea, the indicators were 53-60.5 pg/ml, in women of the control group were 10.2-38.6 pg/ml.

These results are directly related to external stimuli and psycho-emotional symptoms.

Further, a chain of reactions is realized with the participation of the hypothalamus, followed by the release of ACTH by the pituitary gland. When

determining the level of cortisol, a similar tendency is observed, namely, an increase in the value of the hormone to the upper limits of the norm in the main group. In women of the main group it was 469-535 nmol/l, in women of the control group it was 207-418 nmol/l.

Thus, an increase cortisol in blood in patients of the main group if to compare with the control group indicates stimulation of the adrenal cortex as the next response link in the body's response to stress factors.

An assessment of serotonin indicators proves that in the body of patients with psychogenic dysmenorrhea there is a clear decrease in the latter, namely, there were 34-120 ng / ml compared to the control group, where there were 168-209 ng / ml. These indicators correlate with emotional dysfunction and severe pain syndrome.

The study of gonadotropic hormones and sex steroids in patients of both groups did not reveal substantially significant differences. Probably, the mechanisms of their dysfunction depend on longer-term influences of stress factors and on the presence of a different background for the formation of pathology.

The recommended therapy for patients of the main group was as follows:

- prescription of the drug Relaxil, a sedative of herbal origin (valerian hydroalcoholic dry extract, dry peppermint extract, lemon balm dry extract), 4 capsules per day, one in the morning after meals, the second in the middle of the day after meals, and two capsules an hour before sleep. The drug was prescribed 10 days before the expected menstruation for three menstrual cycles;

- prescription of non-steroidal anti-inflammatory (NSAI) rectal suppositories, one per day before sleep five days before the expected menstruation for three menstrual cycles;

- light physical activity in the morning (swimming, exercise therapy, hiking in the fresh air)

- exclusion of any use of gadgets before bedtime;

- exclusion of alcohol intake while taking Relaxil;

- general relaxing body massage without the collar zone;

- follow-up examination three months after treatment.

Three months after treatment, all the main group patients noted a significant decrease in pain.

69.4% of patients noted the complete disappearance of pain, 50% of patients noted an improvement in mood, a surge of energy, a sense of confidence and calmness, 71.4% of patients indicated that external stress factors did not cause them the same reaction of anxiety and fear anymore. By the third month of treatment, 80.4% of patients noted the almost complete disappearance of the fear of pain before the expected menstruation.

Conclusions. Psychogenic dysmenorrhea is the result of exposure to chronic stress. There are reciprocal relations between the central and peripheral departments of perception and response to negative factors of external aggression. Chronic stimulation of stress response systems, on the one hand, leads to the appearance of persistent psycho-neurotic states (periodic-permanent anxiety, depression, panic attacks, irritability, fear), and on the other hand, leads to psychosomatic manifestations of pain in the form of dysmenoria.

Revealed as a result of the study that the increase in CRH, ACTH, cortisol and a significant decrease in serotonin in patients of the main group compared to patients in the control group, without changes in the gonadotropin and ovarian endocrine response, can be considered as a replacement in mental conflict and an attempt of the body to resolve this conflict through somatic symptoms.

An example of such a conversion is psychogenic dysmenorrhea. At the stage of this jump from the mental to the somatic area, it is possible to use relatively mild therapy as a preventive measure for the development of organic pathology (mode, light physical activity, the use of herbal sedatives, NSAIDs), aimed at eliminating pathological mental responses and breaking the transmission of neurogenic signals to somatic organs.