Psychological Features of Stress in Pregnant Women

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ABSTRACT
Pathology of pregnancy can be associated not only with infectious, metabolic and endocrine factors, but also with psychoemotional factors. The correlation of stress and somatic reactions is urgent in obstetrics. According to statistical data obtained from various studies, women, due to their psychological characteristics, are more exposed to stress than men. Pregnant women are the most vulnerable in stressful situations, they are more susceptible to various changes that may occur during pregnancy, as changes in the functional state of the nervous system cause increased sensitivity, instability of mental reactions. The psychoemotional state can affect the development of somatic diseases; in the case of pregnancy, there is a threat of disruption in the regulation of central and peripheral homeostasis; stress can also affect the specificity of uterine contractions, the volume of blood loss in labor, the condition of the fetus and the newborn. Psychoemotional disorders increase the risk of complications in pregnancy and have an adverse effect on the social functioning of women. The authors analyze the characteristics of the course of stress in pregnant women depending on the trimester, social factors, housing conditions, health characteristics, biological factors. Various reactions to stress and the relationship of these reactions to psychosomatic diseases are also considered. The paper diagnostic scales and complex instruments used in the practice of obstetrician-gynecologists and clinical psychologists working with pregnant women.

Keywords: stress, pregnant women, psychological state, clinical linguistics, obstetrics, gynecology

INTRODUCTION
Psychosomatic disorders are defined as a violation of the functions of internal organs, the emergence and development of which are associated with neuropsychiatric factors, mental trauma, as well as certain personality traits. The following psychological and psychosocial factors influence the pathogenesis of somatic diseases: hereditary predisposition, disturbances in the activity of the central nervous system; background of unfavorable family and other social factors, behavioral, personal characteristics (reaction to illness, reaction to stress, motivational sphere, value orientations, internal conflicts), stressful situations. If a person is inclined to protracted emotionally-negative conditions, the chances of developing somatic diseases increase [1]. Currently, more than 300 different concepts of psychosomatic medicine can be distinguished. The most common are somato-oriented (R.F. Harvey, W.R. Lovatto et al.), psychoanalytic (A. Zanchetti, O. Tetsuya et al.), character-oriented (M. Friedman, R. Rosenman et al.), psychophysiological (H. Wolff, J. Laccy et al.), and homeostatic (G. Engel, M. Sperling, M. Mahler et al.). There is a number of concepts according to which the defensive mechanisms of individual development play a decisive role in the appearance of somatic-type diseases, namely, maturity and regression, interaction with internal factors, suppression of negative emotions (J. Ruesch, A. Mitscherlich, M. Schur, P. Sifneos); an approach united by neurohumoral theories (W. Cannon, R. Lazarus, H. Selye), which prove that psychosomatic pathologies are associated with violations of the internal environment of the organism; complex or systemic approaches [2]. However, in different approaches it is possible to single out the general idea that, to some extent, stress is the cause of somatic diseases. The researchers singled out seven basic psychosomatic diseases: essential hypertension, duodenal ulcer, bronchial asthma, diabetes mellitus, ulcerative colitis, rheumatoid arthritis, neurodermatitis. These disorders are considered as classic psychosomatic diseases. Also, these diseases include thyrotoxicosis, uterine myoma, ischemic heart disease, urogenital diseases, irritable bowel syndrome, some forms of psychogenic obesity, bulimia nervosa and anorexia [2].

Materials And Methods
The materials for research were processed in the laboratory “Clinical Linguistics” (Kazan Federal University) in the frame of the project connected with linguistic validation of psychometric materials which are used in the clinical practice of obstetrician-gynecologists [3]. The theoretical basis of the study is presented by materials collected as a result of own research and by the method of continuous sampling from scientific databases: PubMed
Results
The development of the ovum, fetus and baby depends on the dominant, which is formed in a woman during pregnancy and provides the ability to control the physiological and neuropsychic processes. The gestational dominant comes to replace the dominant conception and is necessary for the normal course of pregnancy, and, in turn, is replaced by a generic dominant, which is obviously necessary for the normal course of labor. Gestational dominant includes two components: physiological and psychological. The degree of the woman’s readiness for maternity reflects the psychological component of the pregnancy dominant. The physiological component is determined by the fact that with the help of the dominant, certain physiological processes accompanying pregnancy are maintained and regulated. The psychological component of the gestational dominant can be suppressed when various stress factors arise, and in this connection in a number of cases a pathological course of pregnancy and childbirth is observed [4]. Researchers point out that stress manifests itself more at the beginning and at the end of pregnancy. However, throughout the whole pregnancy, women exhibited a vibrating anxiety. In the first trimester, one of the most significant stress factors is a change in the state of health, fatigue, and taking on a new role. In the second trimester, stress in women is caused by hospitalization, frequent visits to the doctor, fear of childbirth [Striebich 2018]. In the third trimester, all stress factors are reduced to anxiety for the health of the child [5]. In addition, the following factors affect the development of stress: social situation, low incomes, problems at work, disruption of work and rest schedules, poor housing conditions; medical factors characterized by the presence of certain diseases; biological factors, which include alcohol abuse, smoking, eating disorders, etc. The development of the reaction to stress passes through several stages: the first stage is evaluation, the second stage is exhaustion. The first stage influences on whether there will be a reaction to a stressful event and what kind of reaction it will turn out to be. If the event is perceived as a threat, like something that exceeds the capabilities of a person, the mobilization process begins. When the stressful effect occurs in desperate conditions and the needs of the individual are not realized, then the adaptation of the organism does not arise, the reaction to stress acquires a protracted character. If the impact of the stress factor is extremely intense or prolonged, the stress goes to the stage of exhaustion, which leads to physiological changes in the body. The second stage is associated with the process of activation of the parasympathetic division of the autonomic nervous system. In modern science, the reaction to stress is also associated with the work of the immune system. Also, the term distress is used to refer to the last stage of a stress reaction.

Discussion
The state of acute or chronic stress in pregnant women in some cases is accompanied by anxiety, depression and its consequences. Symptoms of depression and stress are the predictors of the injection of macrophage migration inhibitory factor (MIF) in the body of a pregnant woman. An increase in the level of MIF during pregnancy leads to a risk of developing gestosis in the third trimester and premature birth [7]. Also, the release of stress hormones into the body of a woman causes a violation of the decidualization of the endometrium and the implantation of the blastocyst, which in turn leads to the pathology and can cause the termination of pregnancy in the early stage. In addition, an acute reaction to stress may be one of the causes of placental insufficiency, which can lead to intrauterine growth retardation. Thus, chronic stress, which can be tested for several weeks, can lead to a slowing of the development of embryonic cells, and subsequently the growth of the fetus. This contributes to the risk of termination of pregnancy or creates a threat of premature delivery [8]. Among the psychological factors that influence the development of the pathology in pregnancy, the most often identified are inadequate mechanisms for stress and personality characteristics of women [9]. But in some women a certain protective reaction of the body to psychogenic factors works during pregnancy – such women, on the contrary, become more calm, cease to react even to those situations that before pregnancy provoked a stressful reaction. The reaction to pregnancy and accompanying factors depends on the woman’s personality. In Russia there are several classifications. In 1995 N.L.Mamycheva identified three types of psychosomatic response of women to pregnancy: compensated, subcompensated and decompensated. The first type is not characterized by any mental illnesses and neurotic reactions associated with pregnancy. The second type is characterized by neurotic reactions and anxiety caused by pregnancy. In women of the third type, there are various neuropsychiatric disorders, for example, a depressive condition, neurasthenia, or neurosis [10]. Also, two types of response in pregnant women to stressful stimuli were identified: the first is characterized by the appearance of neurotic disorders, a high level of anxiety, mental rigidity; the second – byasthenization.
of the organism, behavior with introverted features, denial of problems [11]. According to another typology, the following types are distinguished in relation to women for pregnancy and maternity: adequate, anxious, euphoric, ignoring, ambivalent, rejecting. Adequate type is characterized by the absence of long-term and strong negative experiences. For anxious type, there are causeless fears, anxieties, depressive states. In a special form, these features are manifested in the first trimester of pregnancy. The euphoric type carries inadequate coloring of all emotional states, characterized by uncritical attitude in various possible problems of pregnancy. Ignoring type is characterized by late identification of pregnancy. In this case, pregnancy is accompanied by a feeling of vexation and surprise. The ambivalent type is similar to a disturbing type by a number of criteria, but the obvious feature is the reactions to the perturbations that are opposite in emotional and physical sensations. This type is characterized by the advantage of fear for the child and the outcome of pregnancy. The fundamental criterion for the rejecting type is a constant sense of anxiety and sharp negative emotions. The causes of anxiety may be ignorance of some aspects that are associated with pregnancy, woman's health, childbirth and child development, as well as a feeling of loneliness or insecurity that a woman can experience during pregnancy [12].

Conclusion
According to the data of research connected with women in Russia, a high level of anxiety occurs in 67.5% of pregnant women. The state of acute or chronic stress in pregnant women in some cases is accompanied by depression, hysteria, paranoia, psychasthenia, hypochondria, mental rigidity [5]. So, women with pathological pregnancy and women from the risk group should be offered psychometric tests for diagnosing the levels of anxiety and depression (Hospital Anxiety and Depression Scale; Beck Depression Inventory; Zung Self-Rating Depression Scale etc.), Leonhard-Shmishek questionnaire to reveal personality trait accentuation. At the moment, a system of differential psycho-preventive preparation for delivery of pregnant high-risk groups is used. This complex includes, in addition to the above, the following techniques: the Luscher color test, the Rosenzweig test, the Cattell test. Specific attention should be paid on alexithymic patients as it is proved that they have a higher risk of psychosomatic disorders [13, 14, 15].

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