THE CURRENT STATE OF THE PROBLEM OF PERINATAL PSYCHOSOMATIC DISORDERS IN PREGNANT WOMEN

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Abstract

Purpose: to study the characteristics of the psychosomatic state of women during pregnancy using the Edinburgh Postpartum Depression Scale (EPDS). **Subjects&methods.** Sixty pregnant women in the III trimester of pregnancy were tested using the EPDS questionnaire, a 10-point self-assessment scale that covers the general symptoms of depression. To determine the internal consistency and reliability of this scale, the Cronbach alpha indicator, a statistical indicator that allows evaluation of whether the features included in the questionnaire measure the same thing (high internal agreement), or different things (low internal agreement), was calculated. **Results.** Subjectively, all pregnant women noted simplicity, unambiguity and clear wording of the questions, which indicated good acceptability of this questionnaire for the use in the complex of standard monitoring of pregnant women in an antenatal clinic. The Cronbach alpha coefficient was 0.775, which corresponds to a sufficient degree of consistency of the internal elements of the scale. Screening for depressive disorders using EPDS during pregnancy revealed psychosomatic problems of the perinatal period. Data obtained using this scale demonstrate high rates of depressive manifestations in pregnant women. Psychopathological disorders were detected in 40% of women, while in 23% the symptoms of the current "major" depression were identified. The frequency of development of depressive symptoms increases significantly in the presence of a high obstetric risk, characteristic of the current pregnancy (threat of premature birth, hypertensive disorders during pregnancy, intrauterine infection of the fetus, retardation of the fetus development), as well as compromised obstetric and gynecological history. EPDS can be used as a reliable diagnostic tool to prevent pregnancy-related adverse outcomes. **Conclusions.** Sdentifying the risk factors of pregnancy, screening and examining psychosomatic symptoms with EPDS, and timely referral for psychiatric care are key issues for reducing the risk among women with psychosomatic disorders during pregnancy and the postpartum period.

Keywords: *pregnancy, psychosomatic disorders, Edinburgh postpartum depression scale.*

Introduction

The health of future generations in recent years has become one of the priority medical-social areas of modern obstetrics and gynecology in Ukraine and in the world. At the same time, the perinatal period is unique in its significance for the establishment of the foundations of national health. Improvement of methods for the integrated study of physiological and pathological manifestations of gestational adaptation in the mother and fetus during this period will make it possible to identify new reserves for improving the quality of medical care [1, 2]. It is very important to assess a huge number of factors under the influence of which the so-called "high risk" pregnancy is formed. Among these factors a special place is occupied by chronic psycho-emotional stress, which is formed against a background of socio-economic, family, professional negative effects on the modern person and of course including pregnant women who are one of the vulnerable parts of society [3, 4]. Based on historically oriented, illuminated scientific works from philosophers of antiquity to modern medical forums, the concept of unity in a person's mental and somatic, unfavorable psychological condition of the future mother adversely affects the course and outcome of pregnancy, childbirth,

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fetus, newborn and child health. Prolonged and intense exposure to stress factors leads to development of a significant number of psychosomatic diseases of pregnancy [5, 6].

The term "psychosomatic disorder" identifies psychological and emotional effects as the leading etiological element of the manifestations of diseases in which it is impossible to find any organic pathological causes, and which appear to be the result of emotional states, such as anger, anxiety, depression and guilt. At the present stage, given the high incidence of mental disorders, psychosomatic medicine has been recognized as a special area of psychiatry, which provides psychological support and psychiatric care to patients with various complex medical and obstetric conditions [7]. In the presented report, we tried to highlight the epidemiological aspects of the most important psychosomatic disorders during pregnancy, as well as the main directions of diagnosis and prevention of common types of this pathology.

Most studies of psychosomatic disorders during pregnancy focus on major postpartum depression, however, according to literary data and our own observations, most women who have been diagnosed in this way have symptoms of depression in the antenatal period. And despite the fact that the Psychiatric Diagnostic and Statistical Manual of Mental Disorders (DSM-5), developed by the American Psychiatric Association, identifies only depressive disorders in women between 4 weeks and 3 months after childbirth, it is the antenatal depressive symptoms that are the source of postpartum problems and are detected in most patients [8, 9].

The results of a study conducted in the United States showed that 33% of postpartum depression begins during pregnancy and 27% before pregnancy. In the first, second and third trimesters the frequency of depressions was 7.4, 12.8, and 12%, respectively. It is important for clinicians to solve this problem that antenatal monitoring and timely identification of groups of pregnant women at high risk of developing postpartum depression should be the basis of effective preventive measures [2, 10].

The perinatal period is also critical for development of anxiety disorders in pregnant women and puerperas; cohort studies conducted by European scientists showed that anxiety occurred in 30% of women in the second trimester and in 16% in the postnatal period, two categories of anxiety were described: subsyndromic state anxiety (intensity indicator experiences, which arises in relation to typical events) and clinically significant comorbid anxiety (social phobias, generalized and mixed-depressive states I), which occurs in approximately 50% of women with depression during pregnancy and the postpartum period. The anxiety symptoms have a negative impact on the outcome of pregnancy, form a negative attitude towards motherhood and violate the processes of perinatal adaptation [11].

Psychological problems, anxiety, lack of social and family support are known risk factors for the occurrence of post-traumatic stress symptoms associated with childbirth. Postpartum post-traumatic stress disorder occurs more often after instrumental delivery through the birth canal or emergency caesarean section, while the risk is minimal after elective caesarean section. Spontaneous abortion and perinatal death also lead to postpartum post-traumatic stress disorder, in 29% of women it develops after stillbirth. The risk of major depression, appearance of generalized anxiety disorder, increases 5 and 3 times, respectively, about a third of women report suicidal thoughts. Early identification and prompt psychiatric care remain the main therapeutic and preventive measures for such patients [12, 13].

It is necessary to note the increased risk of psychosomatic clinical manifestations and obstetric complications in pregnant women with eating disorders. According to the current data, anorexia nervosa and bulimia nervosa occur in 0.2–0.7% of the population and in 0.8–2.3% women, however, a significant proportion of women with eating disorders before pregnancy note recurrence of symptoms after childbirth, however, the risk of postpartum depression is significantly increased in these women compared with the women with a history of eating disorder, but without active symptoms [14, 15].

Despite the high frequency of perinatal psychosomatic disorders, research in this direction is still insufficient. In particular, the question about the optimal timing and clinical efficacy of diagnostic tests, the need to use psychometric questionnaires as a tool for perinatal screening remains unresolved. The most commonly used screening method is the Edinburgh Postpartum Depression Scale (EPDS), which is a ten-point questionnaire (including the issue of self-harm), adopted in many countries for both antenatal and postnatal use. According to the recent studies, the test has a sensitivity of 88% and a specificity of up to 92.5% while, combined with the general health questionnaire (GHQ), the predictive value of an integrated approach is increased compared

to using each method separately. At the same time, as many international guidelines emphasize, screening methods are not so much aimed at diagnosing depressive disorders, but rather aimed at identifying women for whom further comprehensive psychosocial and clinical evaluation is needed [16, 17].

Thus, at present, there is a need for additional studies aimed at investigation of the clinical features, nosological affiliation of psychosomatic symptoms in the perinatal period and development of integrated approaches to the diagnosis, correction and prevention of psychosomatic perinatal disorders.

2. Purposes, subjects and methods:

2.1. Purpose: to study the features of the psychosomatic state of women during pregnancy using the EPDS.

2.2. Subjects & Methods

Sixty pregnant women were examined in the third trimester of pregnancy, who were tested according to the Edinburgh scale of postpartum depression in the conditions of antenatal clinic; then they were tested 2–3 days and 6 weeks after the delivery.

The Edinburgh Postpartum Depression Scale (EPDS) is a 10-point self-assessment scale that was developed to screen a wide population for postnatal depression (Cox et al., 1987). This scale covers the overall symptoms of depression; this excludes somatic measurements, such as fatigue and changes in the appetite, which are normal before and after childbirth. Each item is rated on a 4-point scale (from 0 to 3) with a minimum total score of 0 and a maximum of 30.

After signing a written informed consent, the pregnant women who agreed to participate filled out the EPDS questionnaires.

To determine the internal consistency and reliability of the specified scale, the Cronbach alpha indicator, a statistical indicator was calculated. This allows evaluation of whether the characteristics included in the questionnaire measure the same thing (high internal agreement, or different things (low internal agreement). are not related in meaning to each other, then the alpha indicator is 0, but if all the signs measure the same thing, then the alpha value is 1.0, the internal agreement is considered satisfactory with an alpha value of more than 0.7.

The statistical methodology of factor analysis was also used a comprehensive and systematic study and measurement of the impact of factors on the value of the effective indicator, the factors as a result of the analysis receive a quantitative and qualitative assessment, in order to highlight in the totality of the signs of those that really affect the change in the dependent variable.

The obtained data were subjected to statistical processing using Student's criterion, the Spearman correlation coefficient.

Conflict of interests

The authors of the article declare no conflict of interest.

3. Results and discussion

The average age of the surveyed was 29.7±4.6 years. According to the history, there was no significant difference in parity, frequency of concomitant somatic and gynecological pathology among pregnant women. The inclusion criteria were pregnant women from pregnancy 28 to 37 weeks and at least 18 years old. Exclusion criteria were mental disorders in pregnant women.

The analysis of the socio-demographic and clinical-anamnestic data of the pregnant women are presented in *Table 1*. All women were married or lived with the father of the child, most of them were born in Ukraine, all levels of education are equally represented among the examined.

Twenty-four (40%) of the examined were multiparous, one third of the examined were hospitalized during the previous 2 weeks, 12 (20%) were treated for infertility, 3 (5%) had a history of preterm delivery, 15 (25%) had previously been artificial abortion, 13 (22%) – spontaneous abortion, one (2%) had an ectopic pregnancy.

Women found the EPDS quite acceptable, filling out the questionnaire took no more than 10 minutes, subjectively, all pregnant women noted simplicity, unambiguity and clear wording of questions. Each questionnaire was completely filled in. Therefore, it should be concluded about the good acceptability of this questionnaire for the use in the complex standard monitoring of pregnant women in female counseling.

Of the 60 women, 16 (23%) had symptoms of "major" depression, none had ongoing manic or hypomanic episodes. Average ratings according to the EPDS scale were 9.3±6.1 (minimum 0, maximum 28), while statistical analysis showed high sensitivity and specificity for choosing a threshold value of 11.5 points as an indicator of the level of the Edinburgh scale for pregnant women with serious depressive disorders.

To assess the internal consistency of the EPDS, adapted for our study, the Cronbach alpha coefficient was calculated, and a value greater than 0.8 was chosen as a sufficient level for assessing the reliability of the scale. In our study,

Table 1

Socio-demographic characteristics and complications of pregnancy

	No	%
Family status		
Married	44	73
Lives with the baby's father	59	98
Single	16	27
Place of birth		
Ukraine	46	77
Other countries	14	23
Education		
School education	12	20
College	24	40
Higher education	24	40
Profession		
Office workers	47	78
Manual workers	4	7
Not working	9	15
Complications of current pregnancy		
Hypertensive disorders	5	8
Polyhydramnios	2	4
The threat of preterm birth	38	63
Gestational diabetes	2	4
Retardation of the fetus	4	6
Intrauterine infection of the fetus	3	5

the value of this coefficient was 0.857, which showed a sufficient degree of consistency of the internal elements of the scale and its reliability in assessing psychosomatic disorders in pregnant women. Correlation analysis, components of the questionnaire with the total value of the EPDS, revealed statistically significant correlations ($p < 0.01$).

A factor analysis allowed us to obtain a two-factor model for the EPDS during pregnancy: one factor consists of "depression" elements (F1) and the other factor consists of elements reflecting depression and other disorders, including anxiety (F1) (*table 2*), the first factor F1 includes the following items: 3 (fault), 4 (alarm), 5 (panic attacks), 6 (congestion) and 10 (suicide ideas), the second factor F2 consists of points 1 and 2 (angedonia), 7 (sleep disorders), 8 (sadness) and 9 (tearfulness). Items 7 and 9 are included in both factors.

The average total F2 score was significantly different (Student's t test, $p<0.001$) among depressed (according to DSM IV criteria) and non-depressed women. For F1, the difference in mean total scores between the two groups (depression = no depression) was not significant.

Internal consistency, as measured by the Cronbach alpha scale, was 0.76 for the global EPDS scale, 0.77 for the F1 subscale, and 0.85 for the F2 subscale.

Retesting was carried out in 23 pregnant women who were in the same clinical condition during the test. The average duration between tests was 4.7±1.7 days (minimum 1 day, maximum

Table 2

Characteristics of the factor analysis of the EPDS scale on the Cronbach alpha scale

	F1	F2
Sections of the EPDS scale		
Section 1(angedonia)		0,898
Section 2(angedonia)		0.667
Section 3(guilt)	0,743	
Section 4 (anxiety)	0,635	
Section 5 (panic attacks)	0,806	
Section 6 (overwhelmed)	0,714	
Section 7 (sleep disorders)	0,564	0,675
Section 8 (sadness)		0,836
Section 9 (tearfulness)	0,622	0,614
Section 10 (suicidal ideas)	0,853	

5 days). The correlation coefficient was 0.83 ($p<0.05$), which indicates high reliability of retesting.

Discussion. Thus, the results obtained indicate a sufficiently high level of "major" depression and high dysphoria in the examined group of pregnant women, among whom 40% had a high-risk pregnancy. It should be noted that the frequency of development of depressive symptoms increases significantly in the presence of a high obstetric risk characteristic of the current pregnancy (threat of premature birth, hypertensive disorders during pregnancy, fetal infection of the fetus, fetal retardation), as well as burdened obstetric and gynecological anamnesis.

The results of the assessment of the consistency of the questionnaire, as well as the factor analysis carried out confirm the good reliability of the used scale for screening pregnant women who may have depressive disorders.

Our study shows that the value of the EPDS score, 11.5, gives good sensitivity (0.80) and specificity (0.80) for screening women who may have depressive disorders during pregnancy, confirms good internal consistency of the scale and its good short-term reliability when re-testing. Factor analysis involves a model with two subscales (F1 and F2).

Our data are in good agreement with the literature data, since many medical associations, such as the American Academy of Pediatricians, the European Association of Gynecological Obstetricians strongly recommend screening for depression with the EPDS and do it during pregnancy, immediately after birth, and 1–2 months after giving birth [18, 19]. The prospect of our further research on the diagnostic and therapeutic aspects of the psychosomatic problems of the perinatal period will be to obtain more accurate diagnostic criteria for screening testing, as well as for an objective assessment of the effectiveness of therapeutic interventions in high-risk pregnant women.

4. Conclusion

Identifying risk factors of pregnancy, screening and examining psychosomatic symptoms with the EPDS, and timely referral for psychiatric care are key issues for reducing risk among women with psychosomatic disorders during pregnancy and the postpartum period.

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