Les tendances actuelles de la mondialisation de la science mondiale • Volume 2

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RETRO- AND PROSPECTIVE ANALYSIS COURSE OF PREGNANCY AND CHILDBIRTH IN WOMEN WITH POSTPARTUM DEPRESSION

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Introduction.
Postpartum depression (PPD) is a special medical and social problem that can significantly affect the health of women and their children [1]. There is a lot of data on the negative effects of maternal depression for cognitive and social development of the child. These children often experience emotional and behavioral disorders [2].

PPD can be defined as an episode of major depression during the first 6 months postpartum, but the episode PPD may appear at any time during the first year after delivery (O’Hara & McCabe, 2013). Usually, PPD begins with the first days of the first two weeks after the birth of the baby and can last from 1 to 6-7 months [2]. But there is evidence that PPD may appear 3 years after childbirth [3]. The concept of PPD includes heterogeneous nosological affective disorders of varying severity, starting from short-term lower mood to severe depression with anxiety, fear, indifference, hostility to the child, sleep disturbances, possible manic manifestations, hallucinations, and panic fears. PPD leads to a violation of social adaptation, a decrease in the quality of life, the emergence of suicidal thoughts [3]. With each subsequent delivery, the risk of PPD increases, especially if psychotic disorders (manic manifestations and hallucinations (mostly auditory) are observed in the structure of this affective state [3].
The PPD ranges from 10% to 22% of the total birthrate, which may vary depending on the level of socio-economic development of the country and may vary depending on the scales and questionnaires used to assess this status [1, 5, 2]. According to information sources, the depression disorder spectrum in Europe and the United States fluctuates within 5-10% [1,4,2]. About 20% of the 3,000 outpatient patients have being examined for psychopathic disorders, and in most cases (about 77%) it cannot be recognized [6]. According to the Ministry of Health of Ukraine for 2011, 70% of mental illness make up psychiatric disorders of a non-psychotic level, among them depression prevails. The main part of depression is postpartum depressive disorder. Annually in Ukraine about 40 thousand women suffer from such emotional disorder [4].

There is no consensus on the etiological mechanisms of PPD development. Some authors attach importance to genetic factors in the development of depressive disorders in childbirth [5]. At the same time there is evidence of the influence of somatic pathology on the occurrence of PPD [2]. Much of the research on the causes of depressive disorders in childbirth is given to abrupt changes in the hormonal status before and after childbirth. Currently, studies are conducted to find out the correlations between deviations of hormonal parameters before and during pregnancy with the risk of depression after delivery. Of great importance is the change in the system of "hypothalamus-pituitary-adrenal gland" and the thyroid gland [7, 8]. It is believed that vitamin D deficiency in 2-3 trimester can be a factor in the development of PPD [2, 7]. Changes in levels of the main and saturated fatty acids during 30-34 weeks of pregnancy are investigated, as possible predictors of PPD [8].

Aim.
To determine the frequency of postpartum depression (PD) in Ukrainian women, identify risk factors and particularitis of clinical manifestations of depressive disorders.

Materials and Methods.
237 women were examined in the late postpartum period (2-5 days postpartum). The following psychometric scales were used for objectivity clinical data:
- Edinburgh Posnatal Depression Scale, EPDS, criteria of which - more than 9 points - became a violation of the psychological state, more than 12 points - the primary manifestations of PPD.
- Hospital Anxiety and Depression Scale, HADS. The assessment criteria for this scale were: 8-10 points - subclinical manifestations of anxiety and depression, more than 11 points - clinically significant manifestations of anxiety and depression.

According to the data obtained, the following groups were formed: A - without identified psychological disorders, 124 women (52.32%), average score for EPDS was 3 ± 0.87, for HADS - 4 ± 2.93, and B - with signs psychological disorders’ signs (113 women - 47.67%), the average score for EPDS was 17.4 ± 2.98, for HADS - 15.6 ± 1.78. Group B was divided into subgroups: B1 - subclinical manifestations of PPD, EPDS - 10.36 ± 2.58, HADS - 8.9 ± 0.78 (83 women - 73.45%), and B2 - pronounced manifestations of PPD, EPDS - 21.9 ± 1.24, HADS - 16.8 ± 1.7 (30 women – 26.54%). The average age – 28,3 (± 6.5 years). Statistical processing of data using MS Excel 2007, Statistics +.

Results.
According to our research the frequency of violations of the psychological state of women was 47.67%, including subclinical manifestations found in 73.46%,
expressed clinical signs of postpartum depression in 26.54%, severe cases of PPD were not fixed (pict. 1).

Pict. 1. **Depth of postnatal depressive disorders**

In the group with subclinical manifestations of postpartum depression, the birth of the first child was found in 79.51% (66 women). For groups B2 and A, the availability of births in history did not have a significant difference. In group without psychological disorders 114 women (91.9%) gave births with the presence of a partner, in 87.5% husbands were partners, that fact positively affects the psychological health of women and helps to overcome stress caused by childbirth [6, 8], in other cases, 4.4% friends and mothers were partners. For women with subclinical manifestations, partner births were 75.9% (63 women), and in the group with pronounced signs PPD - 66.6% (20 women). There was no significant difference between elective and urgent Caesarean section (Table 1).

**Comparative characteristics of childbirth in groups**

| Characteristics       | Group B1                          | Group B2                          | Group A                          |
|-----------------------|-----------------------------------|-----------------------------------|----------------------------------|
| Delivery              | First — 66 (79.51%)               | First — 17 (56.6%)                | First — 72 (58%)                 |
|                       | Repeated — 17 (20.48%)            | Repeated — 13 (43.3%)             | Repeated — 52 (42%)              |
| Partnered births      | 63 (75.9%)                        | 20 (66.6%)                        | 114 (91.9%)                      |
| Term of delivery      | 35-36 w. - 4 (4.81%)              | 35-36 w. – 0                      | 35-36w. – 0                      |
|                       | 37-38 w. - 19 (22.9%)             | 37-38 w. - 7 (23.3%)              | 37-38 w. - 7 (5.6%)              |
|                       | 39-40 w. - 43 (51.8%)             | 39-40 w. - 17 (56.6%)             | 39-40 w. - 107 (86.3%)           |
|                       | 41-42 w. - 17 (20.49%)            | 41-42 w. - 6 (20.1%)              | 41-42 w. - 10 (8.1%)             |
| Method of delivery    | Cesarean section — 10 (12.04%)   | Cesarean section — 4 (13.4%)     | Cesarean section — 10 (8.1%)    |
|                       | Vaginal delivery — 73 (87.95%)    | Vaginal delivery — 26 (86.6%)     | Vaginal delivery — 114 (91.9%)   |

The following risk factors for postpartum psychological disorders and PPD development were identified:
- complications of pregnancy and childbirth, namely: risk of pre-term birth, gestational pyelonephritis, fetal growth restriction, fetal distress;
- gynecological diseases on the anamnesis (erosion and dysplasia of the cervix, myoma, polyps of the endometrium, PCOS, ovarian cysts, colpitis), menstrual irregularities before pregnancy;
- diseases of the endocrine system (prolactinoma, hypothyroidism);
- Chronic diseases, including infectious genesis, which in most cases had an episode of exacerbation during pregnancy (chronic pyelonephritis, chronic gastritis, chronic tonsillitis).

In a group with pronounced clinical manifestations of PPD in 10% of women there was a complication of pregnancy, such as late gestosis, namely, preeclampsia (Table 2).

Spontaneous miscarriages were found in 29.9% of women in the B2 group, 16.86% in B1 and 2.41% in group A. Medical abortion on the anamnesis of the B2 group was 19.9%, B1 - 18.06%, and A — 4.83%. Depressive disorders were more often associated with oligohydramnios than with polyhydramnios. Premature discharge of amniotic fluid with prolongation of the time interval correlates with the severity of psychological disorders. 5 women became pregnant with assisted reproductive technologies - group B1, among them 1 - had second attempt of ART, in group B2 - 2 women (Table 2).

**Table 2**

| Risk factors for PPD development versus control group | Group B1 | Group B2 | Group A |
|------------------------------------------------------|----------|----------|---------|
| Labor weakness                                       | 21 (25.3%) | 7 (23.3%) | 10 (8.06%) |
| Fetal growth restriction                             | 33 (39.76%) | 14 (46.6%) | 13 (10.48%) |
| Fetal distress                                       | 45 (54.2%) | 17 (56.6%) | 8 (6.45%) |
| Gynecological diseases*                               | 56 (67.46%) | 23 (76.6%) | 47 (37.9%) |
| Previous medical abortion                            | 15 (18.06%) | 6 (19.9%) | 6 (4.83%) |
| Previous spontaneous miscarriages                    | 14 (16.86%) | 9 (29.9%) | 3 (2.41%) |
| Menstrual irregularities before pregnancy            | 66 (79.5%) | 26 (86.6%) | 44 (35.48%) |
| Diseases of the endocrine system                     | 21 (25.3%) | 4 (13.3%); 1 (3.3%) | 0 |
| Chronic diseases:                                    |          |          |         |
| pyelonephritis                                       | 17 (20.48%) | 7 (23.3%) | 0 |
| gastritis                                             | 24 (28.91%) | 10 (33.3%) | 16 (12.9%) |
| tonsillitis                                           | 21 (25.3%) | 7 (23.3%) | 20 (16.13%) |

Complications of pregnancy

| Pyelonephritis                                       | 11 (13.2%) | 4 (13.3%) | 0 |
| Risk of pre-term birth                               | 14 (16.86%) | 10 (33.3%) | 8 (6.45%) |
| Preeclampsia                                         | 0 | 3 (10%) | 0 |

*menstrual irregularities before pregnancy – separately.*

During the study, the following symptoms of PPD were identified: mood swings, crying, sleep disturbance, appetite disorder, increased anxiety, sadness, loss of strength, fatigue (Table 3, pict. 2).
Table 3

| PPD symptoms          | Group B1       | Group B2       |
|-----------------------|----------------|----------------|
| Crying                | 49 (59%)       | 20 (66,6%)     |
| Sleep disturbance     | 17 (20,48%)    | 23 (76,66%)    |
| Appetite disorder     | 48 (57,83%)    | 17 (56,6%)     |
| Increased anxiety     | 59 (71,08%)    | 27 (90%)       |
| Fatigue               | 31 (37,35%)    | 17 (56,6%)     |
| Loss of strength      | 28 (33,7%)     | 17 (56,6%)     |
| Mood swings           | 67 (80,72%)    | 30 (100%)      |

Pict.2. **Clinical manifestations of PPD in groups B1 and B2**

An increase in the level of anxiety (HADS I) is observed in healthy women (group A), but this woman’s condition is completely controlled and compensated independently, may be caused by the physiological baby blues or maternity blues, which regresses after 1-5 days.

In women without revealed psychological disorders, common signs were found that, according to the authors, could help to maintain a satisfactory psychological state of women, namely: moderate physical activity during pregnancy, daily walks in the park, sleep at least 8 hours a day, availability of pets, listening to classical music during pregnancy, attending courses for young parents.

**Conclusion.**

According to our research, the frequency of violations of the psychological state in women was 47.67%. Depth of postnatal depressive disorders in most cases corresponds to subclinical manifestations. The authors did not have any cases of serious PPD.

The factors that increase the risk of postpartum depression such as: gynecological diseases, menstrual disorders, chronic somatic diseases, medical and spontaneous abortions in history, endocrine system diseases, complications of pregnancy: fetal growth restriction, fetal distress are determined.
It is found that among the manifestations of PPD are: mood swings, crying, sleep disturbance, appetite disturbance, increased anxiety, subjective sadness, fatigue.

Positive influence on the psychological state of pregnant women is the presence of her husband during childbirth, moderate physical activity, outdoor walking, attending courses by young parents during pregnancy.

Keywords. Anxiety disorders, Depressive disorders, Postpartum depression, postpartum period, pregnancy.

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