State of pregnant women’s mental health with obstetric pathology and aggravated reproductive anamnesis

N. Goncharyk

MNPE “Kyiv City Maternity Hospital №1”

Results and Discussions

We determined the level of state and trait anxiety of pregnant women with obstetric pathology and aggravated reproductive anamnesis at first trimester. A high level of anxiety was found among pregnant women in group 1 (31 (20.7 (16.2-25.2) %) and group 2 (21 (14.0 (9.7-19.3))) %). Also, women in these groups had a medium level of anxiety – 52 (34.7 (30.5-38.9) %) in group I, 58 (38.7 (32.9-44.4) %) in group II. Women of III group had a low level of state anxiety - 127 (84.7 (75.9-93.4) %).

Medium and high level of state anxiety in group I can be explained by surgery history and in group II – by using ART, because level of state anxiety characterizes the state of a woman with experienced emotions.

Also, we have determined the same level of trait anxiety of pregnant woman in I and II groups. Medium level of trait anxiety occurred in 51 (34.0 (27.8-40.2)) %in I group and in 57 (38.0 (30.8-45.2) %) in II group. High level of trait anxiety were often registered in pregnant women of group I - 27 (18.0 (14.6-24.4))% and in pregnant women of group II - 25 (16.7 (12.2-21.2))%. Most pregnant women of III group registered low level of trait anxiety - 130 (86.7 (77.6-95.8))%.

Obtained data suggests high level of state and trait anxiety of pregnant women with obstetric pathology and aggravated reproductive anamnesis. These women can be placed into a category of people, who show a tendency to regard various life situations as a hazard to life, which negatively affects their psycho-emotional state.

In the second trimester level of state and trait anxiety didn’t changed and stay the same, but women of III group had increasing tendency of medium and high levels of both variants of anxiety. Medium level of state anxiety was occurred in 18 (12.0 (7.9-16.1)) %, high level - 12 (8.0 (5.7-10.3)) % Medium level of trait anxiety was occurred in 15 (8.0 (5.7-10.3)) %, high level- 10 (6.7 (4.6-8.8)) %.

In the third trimester of pregnancy, women of all groups had an increase of high and medium level of state and trait anxiety.

More often, a medium level of state and trait anxiety was registered in II group- in 73 (48.7 (39.9-57.4)) % and in 72 (48.0 (39.7-56.3)) %. Such changes in anxiety levels in surveyed women can characterize dangerous trends in the psycho-emotional state of pregnant women. Changes caused by the shift of self-esteem and self-respect, as a reaction to a significant number of situations that happened with women before labor. Psycho-emotional state of such pregnant
women can be characterized as depressed mood, which caused by feeling potentially life threatening. In the light of so high level of state and trait anxiety we decided to conduct a psychological test by using an abbreviated multifactor questionnaire (Mini-multi questionnaire - MMPI). This test showed us that women with uterine scar (I group) on a lie scale had a low level of 42 (28.7 (25.9-30.1)) %. It means that women did not hide their psychological difficulties and weaknesses. Such kind of people have tendency to exaggerate rather than underestimate the level of their interpersonal conflicts. High level of the L scale occurred in 58.7 (38.7 (36.5-40.9)) % of pregnant women. This category of people has tendency to demonstrate strict adherence to social norms to present themselves in a more favorable light. Subsequently, the personality profiles of such pregnant women were analyzed with their clinical data. Women of II group (whose pregnancies are due to the use of ART) on the L scale, have low level in 48 (32.0 (29.7-34.3))% of pregnant women, and a high level in 62 (41.3 (39.6-43.0))%. The results were slightly higher than in group I. Pregnant women of group II with a low level on the L scale in the psychological profile noted a tendency to a critical attitude towards themselves and others, as well as a tendency to skepticism. Women of the II group with a high level on the L scale were highly intellectual, had a great life experience, which also corresponded to the desire to present themselves in a more favorable light. Low level on the L scale of group III was less common - 39 (26.0 (23.7-28.3)) %. The psychological portrait of these women was characterized by the tendency to exaggerate the significance of conflicts, vulnerability, difficulty in building interpersonal relationships. The high level on the L scale in group III allowed to characterize them as people with blinkered vision, who follow the established standard of behavior and adhere to insignificant and non-valuable rules.

Low level on a scale of probability F was in the first group in 14.0 (11.7-16.3)% of pregnant women, in group II – in 27 (18.0 (16.9-19.1))%, and in group III – in 28 (18.7 (16.9-20.5))%. These obtained results indicate the validity of psychological testing. High levels of high scores on the F scale were recorded in group II - 41 (27.3 (25.0-29.6)) %. Such results in group II made it possible to characterize the psychological state of the respondents as uncomfortable and with a peculiar perception and logic. These included women with an 8-baseline scale of the questionnaire. Also, they had psychopathic behavior with severe anxiety and severe difficulties in interpersonal contacts, and they needed help from others in this matter. This characteristic of the personality of women with a high rating was inherent to women in I and III groups.

Determination of the characteristics of the personality of pregnant women on the K scale showed that the low level was in 15 (10.0 (7.6-12.4))% of pregnant women in group I, 18 (12.0 (10.9-13.1)) % in group II and 16 (10.7 (8.4-13.0))% in III group. Such indicators of pregnant women with obstetric pathology and aggravated reproductive anamnesis are considered as a favorable sign. The personality of such pregnant women is characterized by prudence, benevolence, sociability, and they have a positive experience of interpersonal contacts. Such women know how to find the right line of behavior. The high level on the K scale in group I was 10 (6.7 (4.6-8.8)) %, in group II - 15 (10.9 (7.6-12.4)) %, in group III - 12 (8.0 (6.9-9.1)) %. The obtained data on the K scale indicate that a pregnant woman determines her behavior depending on social approval, has a tendency to deny any difficulties in interpersonal relationships and strives to adhere to accepted norms of behavior in order to refrain from criticizing others. According to clinical and psychological signs, such people often express anxiety, self-doubt and want to achieve a benevolent attitude towards themselves.

We also carried out psychological testing according to basic scales [1-9]. For I scale (hypochondria), a low level was found in the first group was in 17 (11.3 (8.8-13.8))% in group II - 14.0 (11.7-16.3, 3)% and in group III - 21 (14.0 (11.7-16.3))%. The personality of pregnant women with a low level on this scale was characterized by a more adaptive form of behavior, a lack of concern about their health, and a more successful solution to life problems and difficulties. Deserve attention the fairly frequent high level on I scale in groups I and II:32 (21.3 (18.8-23.8)) % and 35 (23.3 (21.2-25.4)) % In group III, the high level on I scale was less-18 (12.0 (9.9-13.1)) %. The personality of pregnant women with a high level on the hypochondria scale (1 scale) was close to the antenna-neurotic type. The clinical manifestations of the psychological portrait of such people were characterized by slowness, passivity, take everything literally, they easily lose balance in social. Pregnant women with a high level on I scale show significant anxiety about their physical health, general well-being, ability to work, having somatic dysfunction and frequent pain.

Detection rate of low level on I scale (depression) was 12 (12.0 (10.9-13.1)) % in group I, 17 (11.3 (8.8-13.8)) % in group II. and in group III - 10 (6.7 (4.6-8.8)) %. The personality of such pregnant women was characterized by a low level of anxiety, significant activity, strength, vigor, and energy. Many women in groups I and II had a high level on 2 scale:42 (28.0 (25.9-30.1)) % and 45 (30.0 (27.8-32.2)) %. In group III, this indicator was less - 21 (14.0 (11.7-16.3))%. Respondent with high level were sensitive, anxious, timid, and shy. Also, they personality characterized by conscientiousness, diligence, high moral character, but self-doubt, inability to make independent decisions, frequent despair, they more had manifestations of anxiety than depression. Clinical signs were a sense of inner tension, suspense threat, unpleasant emotional state, frequent fears of imminent disaster. The people around them perceived them as pessimists, self-contained, silent, shy. They react to a maladaptive situation with manifestations of asthma, inertia, and passivity.

A low level on 3 base scale (hysteria) was found in a small number of respondents. The personality of such pregnant women was characterized by introversion, skepticism, and a desire to attract attention. High level on 3 scale was more common, the highest rates were in groups I and II: 21 (14.0 (11.7-16.3)) % and 24 (16.0 (14.2-17.8)) %. The personality of pregnant women with a high level was characterized by a predisposition to conversions type of neurological protective reactions. Ignoring negative signals from the outside allows you to maintain high self-esteem, which often leads to self-admiration. Such a person seeks to be in the highlight, seeks recognition and support, lives by...
Conducted psychological testing on the MMPI questionnaire showed a high frequency of detection, either low or high levels on 9 scale-hypomania. Low level on 9 scale was in group I - 41 (27.3 (25.4-29.2) %), group II - 43 (28.7 (26.9-30.5) %), group III - 42 (28.0 (25.9-30.1) %). Personlalities of pregnant women with this indicator were characterized by a decrease in activity and contact with people. High level on a 9 scale was more common in group II - 41 (27.3 (25.0-29.6) %). Their characteristic features were maladaptation of behavior, poorly directed activity, emotional arousal, irritability. Such women had bouts of depression before pregnancy.

Due to the manifestation of anxiety and depression among the respondents, we decided to investigate the frequency of such conditions, their features using testing and the Beck depression scale (Table 1). The results showed that most women did not have depression: in group I result was 120 (80.0 (72.5-87.5) %) in group II - 119 (79.3 (72.6-86.0) %), group III - 90.0 (81.9-98.1) %. Moderate depression was found in groups I and II: 28 (18.7 (14.4-23.0) %) and 27 (18.0 (14.5-21.5) %). These pregnant women were advised to consult a psychologist for psychotherapy. Moderate depression was observed in 6 women, including 3 after ART. Their condition was due to several unsuccessful attempts of using ART.

### Table 1. The results of testing pregnant women with obstetric pathology and aggravated reproductive anamnesis on the Beck depression scale, abs.n. and %

<table>
<thead>
<tr>
<th>Group of pregnant women</th>
<th>absence of depression (0-11 points)</th>
<th>moderate depression (12-19 points)</th>
<th>average depression (20-25 points)</th>
<th>severe depression (26-63 points)</th>
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<tbody>
<tr>
<td></td>
<td>abs.n. %</td>
<td>abs.n. %</td>
<td>abs.n. %</td>
<td>abs.n. %</td>
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<tr>
<td>I</td>
<td>120 80.0 (72.5-87.5)</td>
<td>28 18.7 (14.4-23.0)</td>
<td>2 1.3 (1.2-1.4)</td>
<td>-</td>
</tr>
<tr>
<td>II</td>
<td>119 79.3 (72.6-86.0)</td>
<td>27 18.0 (14.5-21.5)</td>
<td>3 2.0 (1.9-2.1)</td>
<td>1 6.7 (0.6-0.8)</td>
</tr>
<tr>
<td>III</td>
<td>135 90.0 (81.9-98.1)</td>
<td>14 9.3 (6.8-11.8)</td>
<td>1 0.7 (0.6-0.8)</td>
<td>1</td>
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**Conclusions**

Pregnant women with obstetric pathology and aggravated reproductive anamnesis have changes in their mental health. Such symptoms as: psycho-emotional instability, increasing of state anxiety was registered among pregnant women with uterine scarring (group I) from 22.7% to 47.3%; among women whose pregnancies are due to the use of assisted reproductive technologies (group II) - from 20.0% to 48.7% and among pregnant women with abnormalities of labor (group III) - from 12.7% to 19.3%. There is increasing of trait anxiety: in group I - from 23.3% to 46.0%, in group II - from 22.0% to 48.0% and in group III - from 11.3% to 15.3%. The personality of pregnant women with obstetric pathology and aggravated reproductive anamnesis are characterized by psychopathological disorders, difficulties in interpersonal relationships, self-doubt, inability to make independent decisions and manifestations of anxiety and depression, maladaptation and asthenia. The most pronounced changes in the psycho-emotional state of pregnant women were in the form of moderate depression (in group I - 18.7%, in group II - 18.0% and in group III - 9.3%) and average depression (in group I - 1.3%, in group II - 2.0% and in group III - 0.7%).

So that the mental state of women with an aggravated reproductive anamnesis, need to consult a psychologist at the pre-pregnancy stage.

**References**

4. Order of the Ministry of Health of Ukraine of November 29, 2004 № 579 “On Approval of the Procedure for the Management of Women for the Treatment of Infertility by the Methods of Assistive Reproductive Technologies with Absolute Indications for Budgetary Funds”.