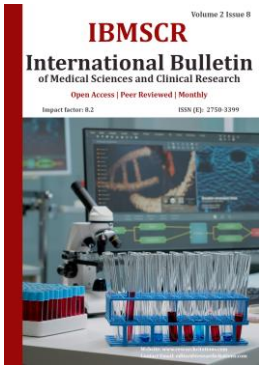

PLACENTAL INSUFFICIENCY: BLOOD AND BIOCHEMISTRY PARAMETERS DEPENDING ON THE METHOD OF TREATMENT

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Annotation: The article presents data from the analysis of clinical characteristics, the course of pregnancy and blood counts, including biochemical data of patients with placental insufficiency who received drug therapy and combined treatment with the inclusion of plasmapheresis and medical ozone. The study was conducted in the first multidisciplinary clinic of Samarkand State Medical University for 2019-2022. The study included 105 patients with placental insufficiency, which were divided depending on the treatment method.
Keywords: placental insufficiency (PI), fetoplacental barrier, ozone therapy, plasmapheresis, placenta, mother-placenta-fetus system.

Relevance. Placental insufficiency (PI) is a syndrome caused by morphofunctional changes in the placental complex, which occurs as a result of a complex reaction of the placenta and fetus in response to various pathological conditions of the maternal organism [4,8, 12, 16].

The key task of obstetrics is antenatal protection of the fetus, which is closely related to the problem of reducing perinatal morbidity and mortality, while one of the main causes of its development is placental insufficiency, which has a multifactorial nature [20, 25, 33].

With this syndrome, changes are observed in the fetal, uterine-placental complexes, as a result of which compensatory-adaptive mechanisms are disrupted at the molecular, cellular and tissue levels and the functions of the placenta change, such as transport, trophic, endocrine, metabolic, antitoxic, which leads to fetal pathology and newborn [9, 15, 18, 22, 29].

According to a number of authors, the frequency of PI in women with chronic exgragenital pathology is quite high, so in pregnant women with inflammatory diseases of the urinary system, it is up to 35%, with anemia - up to 30%, with cardiovascular diseases - up to 45%, with endocrine pathology - up to 25% [12, 15, 18]. Also, quite high (up to 55%) is the frequency of chronic PI in patients with viral and/or bacterial infection [11, 18, 26, 28]. All this indicates the relevance of studying this pathology and the need to develop optimal methods for managing these patients.

Purpose of the study: To analyze the clinical characteristics, the course of pregnancy and blood counts in patients with placental insufficiency who received drug therapy and combined treatment with the inclusion of plasmapheresis and medical ozone.

Materials and methods. In this study, an analysis was made of the course of pregnancy, childbirth, the postpartum period, the condition of the fetuses and newborns in 105 women with chronic placental insufficiency. The gestational age was 24-28 weeks. 55 pregnant women with chronic placental insufficiency with complex treatment with plasmapheresis in combination with medical ozone made up the first group. Group 2 (comparison) - 50 pregnant

women with chronic placental insufficiency, who underwent conventional methods of treatment.

Clinical examination using standard methods (allergy history, heredity, concomitant diseases, menstrual and generative function, the presence and nature of complaints, assessment of the course of pregnancy, objective examination (general and obstetric examination), standard laboratory methods, morphological examination of the placenta). A hemostasiological study and ultrasound were also performed.

All laboratory analyzes were carried out in the laboratory department of multidisciplinary clinic No. 1 of SamSMU.

The data obtained during the study were subjected to statistical processing using the Microsoft Office Excel-2012 software package on a Pentium-IV personal computer, including the use of built-in statistical processing functions. The arithmetic average value (M), standard deviation, standard error of the average (m), relative values (frequency, %), statistics of the measurements obtained when comparing the average values of the studied indicator significance was determined by calculating the probability of error (P) in testing the normality of the distribution (according to the kurtosis) with Student's test (t).

Results and discussion. The age of the patients ranged from 18 to 39 years and averaged 29.2±1.9 years. When analyzing the mass-height ratios in the examined women, no deviations from the population norms were revealed. The average body weight before the onset of pregnancy was 68.3+4.2 kg, the average height was 159.8+7.1 cm. - 28% in the comparison group) and the urinary system (17 - 31.0% and 12 - 24%, respectively, in groups). Also drew attention to the significant proportion of chronic diseases of the respiratory system (12.7% and 16%) and the cardiovascular system (9.09% and 10% in groups, respectively). About a third of women in each of the groups (32.8% and 28%) had a combined extragenital pathology, a similar proportion of patients did not have a aggravated somatic background (also 32.8% and 32%), and a slightly larger part had monoorgan pathology (34, 4% and 40%). The studied groups were comparable in terms of the incidence of uterine pathology.

A high frequency of induced abortion was revealed, which was 56.4% in the main group and 52% in the comparison group, in addition, the frequency of spontaneous miscarriages was 14.5% and 12% in groups, respectively, of non-developing pregnancies (in groups of 12.7% and 10%). The most frequent complications in previous pregnancies were the threat of miscarriage: 69.1% in the main group and 62% in the comparison group, as well as chronic PI - in 43.6% and 44% of women, respectively, in groups. There was also a high incidence of preterm birth and intrauterine infection.

All patients received standard therapy, of which 55 pregnant women (main group) received a course of ozone therapy and plasmapheresis in addition to drug treatment. According to the frequency of anemia in the main group after the treatment, a more distinct positive clinical dynamics was observed: the persistence of anemia was recorded in 7 cases (12.7%) compared to 13 (26%) in the comparison group.

There were no statistically significant differences between the groups in terms of complications of the third trimester of pregnancy ($p>0.05$). Patients of both the main and comparison groups had acute or recurrences of chronic bacterial and/or viral infections during pregnancy. Initially, patients in both groups had a reduced level of protein in the blood serum (59.3 and 60.4 g/l in groups, respectively), but none of the patients had clinical manifestations of hypoproteinemia. The protein level 3 weeks after the treatment in pregnant

women of the main group did not change clinically and amounted to 62.8 g/l, however, due to the rather significant sample size, these differences are statistically significant, p<0.001. In the comparison group, the content of total protein in blood plasma did not change significantly and amounted to 61.2 g/l.

The average levels of bilirubin, urea and creatinine significantly decreased after efferent methods of therapy. The data indicate a statistically significant decrease in the level of liver enzymes after efferent methods of therapy, which may be associated with their mechanical removal along with apheresis plasma. The level of ALT decreased on average in the main group from 31.2 U/l to 17.3 U/l, ACT from 29.1 U/l to 19.4 U/l, ALP from 105.4 U/l to 82, 7 U/l, p<0.001; in the comparison group, the dynamics was not so pronounced, ALT decreased from 33.5 U/l to 26.4±4.0 U/l, ACT from 30.2 U/l to 27.6 U/l, ALP from 106, 8 U/l to 102.4 U/l, p<0.001.

We also analyzed the level of serum iron and found a statistically significant increase after therapy in pregnant women of the main group (on average from 11.2 μmol/l to 17.4 μmol/l), p<0.001. These data are consistent with the dynamics of red blood values according to the clinical analysis: the increase in the level of erythrocytes and hemoglobin during therapy in patients in the main group was also statistically significant and significantly exceeded the similar dynamics in the comparison group (p<0.001).

Conclusions: a biochemical blood test, before and after complex treatment, revealed no decrease in total protein, which could be expected during plasmapheresis sessions, but showed, on the contrary, a slight increase, there was also a decrease in the level of liver enzymes and an improvement in the functioning of the body's natural detoxification systems, which indicates a significant decrease in the level of indicators of endogenous intoxication.

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