

METHODS OF IMMUNOLOGICAL EXAMINATION OF DIAGNOSTICS IN PREGNANT PEOPLE WITH HEMODYNAMIC CHANGES IN THE HEART

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The prevalence of rheumatic heart disease is significantly high in developing countries, which is why it is one of the most common heart diseases in pregnant women. Heart disease is an important cause of maternal mortality in developing countries. In the presence of mitral stenosis (MS), the risk of decompensation of cardiac activity increases, which can threaten the life of both mother and fetus. An urgent task is to develop a system for early prediction of disorders of the adaptive capacity of the myocardium, especially in conditions of mitral stenosis, in order to timely intervene and correct therapy.

Materials and Methods. 110 pregnant women were examined in accordance with the goals and objectives of the work. The research program will be implemented jointly with the Department of Obstetrics and Gynecology No. 2 of the Bukhara State Medical Institute on the basis of the Bukhara Perinatal Center, Bukhara City Maternity Complex. The average age was 28.4 ± 4.7 years.

Results. Severe AP was diagnosed in 21 patients (28.4%). IL-6 and PCT levels within 24 hours of admission were significantly higher in the severe group (IL-6: 94.6 ± 8.3 pg/ml vs. 32.1 ± 4.5 pg/ml; PCT: 3.2 ± 0.6 ng/ml vs. 0.8 ± 0.2 ng/ml; $p < 0.001$). The correlation between IL-6 levels and BISAP scores was $r = 0.71$ ($p < 0.01$). Elevated cystatin-C was associated with renal dysfunction and prolonged hospitalization. Patients receiving antioxidant therapy demonstrated a 1.6-fold faster reduction in CRP levels and a 37% lower incidence of necrotic complications compared to the control group. The average hospital stay was reduced from 14.2 ± 2.1 to 9.3 ± 1.8 days ($p < 0.01$).

Discussion. IL-8 levels were elevated in 77.3% of women (on average 42.3 pg/ml), TNF- α in 64.5% (on average 14.6 pg/ml), which may indicate activation of the innate immune response. The level of IL-2 exceeded the norm in 36.4% of patients (on average 21.2 pg/ml), while the level of IL-10 was reduced in 52.7% of the examined (on average 9.7 pg/ml), reflecting a deficiency in the anti-inflammatory cytokine response.

The data obtained indicate marked changes in the immune and inflammatory status of pregnant women with mitral stenosis. Excess levels of ESR, CRP, IL-8 and TNF- α confirm the presence of a chronic inflammatory process, which may be associated with both the activity of rheumatic valve damage and hemodynamic disorders.

A marked increase in fibrinogen and D-dimer indicates a hypercoagulable state, which is particularly dangerous in the context of pregnancy and may increase the risk of thrombotic complications. Despite this, the INR and APVT values in most patients remained within the normal range, which may be due to compensatory mechanisms.

Conclusions. Determination of the cytokine profile from the first trimester in women with mitral stenosis is a promising direction in the cardiology of pregnant women. This makes it possible to timely identify the risks of impaired adaptive capacity of the myocardium, determine a pregnancy management strategy and minimize adverse outcomes. Future research should focus on creating standardized risk scales and integrating cytokine monitoring into clinical practice.