

CHARACTER OF CARDIAC DISORDERS IN COVID-ASSOCIATED MYOCARDITIS IN PREGNANT WOMEN

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Relevance. During the COVID-19 pandemic, as a result of numerous clinical observations, the involvement of the cardiovascular system in the pathological process has become obvious. The direct damaging effect of COVID-19 is associated with its penetration into cardiomyocytes through angiotensin-converting enzyme-2 receptors, which can lead to the development of myocarditis. **Materials and methods.** 145 pregnant women in the II and III trimesters of gestation were examined, which were divided into 2 groups: group-1 - 100 pregnant women who had COVID-19 in the first trimester, group-2 - 45 pregnant women with a history of chronic focal myocarditis. The control group consisted of 10 healthy pregnant women. Conducted general clinical studies, PCR tests for COVID-19, electrocardiogram (ECG), echocardiography (ECHO CG), troponin determination. The survey does not include pregnant women vaccinated against COVID-19. **Research results.** The age of the surveyed averaged 29.4 ± 5.8 years. In group-1 65% of pregnant women had COVID-19 in I trimester, 35% in II trimester. In group-1, myocarditis was first detected at 8-12 weeks and 16-26 weeks. In group-2, women had a history of myocarditis. In patients of the group-1, the ECG revealed diffuse and metabolic changes in the myocardium (21%), rhythm disturbances and blockade of the Hiss bundle legs (12%). ECHO CG revealed mitral or tricuspid regurgitation (68%), mitral or tricuspid insufficiency (61%). In the group-2, diffuse changes in the myocardium were detected 1.5 times more often, blockade of the left leg of the Hiss bundle was 3.5 times more common than in the group-1. In pregnant women of the group-2, mitral or tricuspid regurgitation was detected 1.8 times less than in the group-1. After cardiotonic therapy, improvements in ECG and ECHO CG were revealed in 78 pregnant women of the group-1 and in 31 pregnant women of the group-2. To determine the degree of destruction of myocytes of the myocardium, a blood test for troponin was performed. In group-1, the average troponin level was significantly higher compared to the control group ($p < 0.001$) only in 5% of patients, which is associated with a short inflammatory process in the myocardium and good efficiency of drug correction. In group-2, the troponin concentration was significantly higher in 45% of patients. The average value of troponin in patients of group-2 was significantly higher than in group-1 ($p < 0.01$) and in the control group ($p < 0.001$), indicating ongoing focal destruction of the myocardium. In 57% of patients of the group-1 and 72% of pregnant women of the group-2, childbirth was completed ahead of schedule by surgery, due to the deterioration of the general condition of the pregnant woman and signs of circulatory disorders. **Conclusions.** In pregnant women, myocarditis develops 3-4 weeks after suffering COVID-19 and is characterized by signs of cardiac and circulatory disorders. However, chronic focal myocarditis leads to more significant destruction of the myocardium. Cardiac and obstetric complications caused by COVID-19 may be the reason for operative delivery.

