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## Research Article

### PERIPARTAL CARDIOMYOPATHY CLINICAL CASE

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#### ABSTRACT

A 35-year-old patient, a native of Uzbekistan, had shortness of breath and swelling of the lower extremities at the 35th week of the fourth pregnancy. She gave birth at the 39th gestational week naturally. Symptoms progressed within 3 months after delivery: ascites and hydrothorax appeared. According to echocardiography, dilation of the heart chambers was detected, the left ventricular ejection fraction was 30%. A diagnosis of peripartal cardiomyopathy (CMP) complicated by CHF third degree was established. During 10 days of treatment, the manifestations of HF decreased significantly.

#### KEYWORDS

Peripartal cardiomyopathy, heart failure, cardiomegaly.

#### INTRODUCTION

Peripartal cardiomyopathy (PCM) as one of the variants of dilated cardiomyopathy develops in women in the last months of pregnancy or within 5 months after delivery. Since the advent of the concept of PCM in cardiology, described for the first time in 1971 by Demakis et al. [3], there was an accumulation of a sufficiently large amount of information. The diagnostic criteria of PCM were determined [4, 5], the

results of long-term follow-up of patients were obtained and recommendations for effective and safe therapy were developed [5]. According to world statistics, pathology occurs in less than 0.1% of pregnant women [6], however, the frequency of adverse outcomes in PCM is quite high (5-32%) [6]. The prognosis of the disease is quite difficult to predict – from complete recovery with the restoration of

myocardial contractility to fatal outcomes against the background of progressive heart failure [7], information about the etiology and pathogenesis of PCM remains contradictory.

### THE MAIN FINDINGS AND RESULTS

A clinical case. The woman is 35 years old, permanently resides in Tashkent. There were no risk factors for the development of signs of rheumatic fever, the effects of toxic substances on the myocardium in the anamnesis. The epidemiological history is not burdened. There are three pregnancies without complications in the anamnesis. The current pregnancy is the fourth, occurred with late severe gestosis; was on inpatient treatment. Registered at the women's clinic at the place of residence from the 8th week of pregnancy. Anemia, changes in the biochemical analysis of blood were not noted. From 35-36 weeks of pregnancy, she noted the appearance of shortness of breath during exercise, from 38 week she could only sleep sitting, edema of the lower extremities appeared and began to rapidly increase, heaviness in the right hypochondrium, the abdomen increased in volume, pronounced swelling of the anterior abdominal wall was noted. At the age of 39 weeks — on November 20, 20.02.23, she gave birth to a boy. The child was born full-term, according to the mother 7-8 points on the Apgar scale. After discharge, she experienced pronounced shortness of breath during breastfeeding, heaviness in the right hypochondrium, swelling of the feet and shins persisted. Ultrasound examination (ultrasound) of abdominal organs was performed, hepatomegaly and small ascites were detected. The prescribed therapy with furosemide (intravenously 20 mg) and a polarizing mixture (intravenously) was accompanied by a temporary positive effect in the form of a decrease in edema. In March 2023, she sought advice from the city clinical hospital with severe manifestations of chronic

heart failure, and was hospitalized. Upon admission, the condition is severe: orthopnea, acrocyanosis, swelling of the feet and shins. Above the lower parts of the lungs, on both sides, weakened vesicular breathing, silent, moist, small-bubbly wheezing. The frequency of respiratory movements at rest is 22 per minute. The heart tones are muted, the rhythm is correct, the heart rate (HR) is 90 per minute. Blood pressure is 120/90 mm Hg. The abdomen is increased in size due to ascites. Liver + 2 cm from under the edge of the costal arch, moderately painful on palpation. Clinical blood test — without pathological changes. In biochemical analysis: ALT — 64.7U/l (up to <40U/l), AsT-42.6 U/l (<35) bilirubin, glucose, creatinine, cholesterol, triglycerides within reference values, serum prolactin 60.3 ng/ml

ECG (02/27/2023 y.). The rhythm is sinus, correct. HR-112. electrical axis of the heart -deflected to the left. Incomplete blockade of the left leg of the Hiss beam. Signs of left ventricular hypertrophy. Metabolic changes of the myocardium.

Echo-cardioscopy revealed dilatation of all chambers of the heart. Hypokinesis of all End diastolic size of LV-86mm walls. End systolic size of LV-73mm. EF-30%. EDV-407. ESV-282. SV-125. Insufficiency of the tricuspid aortic valve of the 1st degree. Tachycardia.

Ultrasound of the thyroid gland: the dimensions are not enlarged, there is a node with clear contours of 6 ×3 mm in the isthmus. Taking into account the appearance of symptoms of HF in the last month of pregnancy, the absence of a history of diseases of the cardiovascular system, as well as any other reasons for the development of HF, a decrease in EF of LV of less than 30%, the presence of risk factors (age over 30 years, repeated childbirth), a diagnosis of peripartal CM (ICD-10 code. About 99.4), complicated by CHF third degree, functional class IV according to NYHA.

Therapy was prescribed: perindopril (2.5 mg), bisoprolol (2.5 mg), spironolactone (50 mg), furosemide (60 mg intravenously). Bromocriptine was added to the standard treatment regimen of CHF at a dose of 2.5 mg 2 times a day. Taking into account the increased risk of thrombosis and thromboembolic complications against the background of taking bromocriptine, heparin was prescribed (5000 units 4 times a day under the control of activated partial thromboplastin time). Against the background of therapy for 10 days, the patient's condition improved, the manifestations of HF significantly decreased, shortness of breath occurred only with significant physical exertion, hydrothorax, ascites, edema of the lower extremities regressed. She was discharged with recommendations to continue taking bromocriptine 2.5 mg 2 times a day in combination with the administration of clexane 40 mg subcutaneously once a day (for 5 days), perindopril (2.5 mg), bisoprolol (2.5 mg), spironolactone (50 mg) under the supervision of a cardiologist, EchoCG monitoring after 6 months.

## CONCLUSIONS

Peripartur CMI is a diagnosis of exclusion. In clinical manifestations with increasing HF, myocarditis, dilated and ischemic CM are discussed. Considering that the appearance and progression of dyspnea occurred in the last month of pregnancy and there were risk factors, a diagnosis of peripartur CM was made. This nosology, in the absence of adequate treatment, is associated with a high risk of death of a woman before childbirth, during childbirth and in the postpartum period.

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