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Case Report: Peripartum Cardiomyopathy, a Rare but Fatal Condition in Pregnancy and Puerperium

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Abstract : Introduction: Peripartum cardiomyopathy is a rare but potentially life-threatening condition that presents as heart failure during the last month of pregnancy or within five months postpartum. The incidence of postpartum cardiomyopathy ranges from 1 in 1300 to 1 in 15,000 pregnancies. Risk factors include multiparty, advanced maternal age, multiple pregnancies, pre-eclampsia, and chronic hypertension. Study: A 30-year-old Para3+0 presented to the Emergency Department of St'Marry Hospital, Isle of Wight, on the seventh day postpartum, with acute shortness of breath (SOB), chest pain, cough, and a temperature of 38 degrees. The risk factors were smoking and class II obesity (BMI of 40.62). The patient had mild pre-eclampsia in the last pregnancy and was on labetalol and aspirin during an antenatal period, which was stopped postnatally. There was also a history of pre-eclampsia and haemolysis, elevated liver enzymes, low platelets (HELLP syndrome) in previous pregnancies, which led to preterm delivery at 35 weeks in the second pregnancy, and the first baby was stillborn at 24 weeks. On assessment, there was a national early warning score (NEWS score) of 3, persistent tachycardia, and mild crepitation in the lungs. Initial investigations revealed an enlarged heart on chest X-ray, and a CT pulmonary angiogram indicated bilateral basal pulmonary congestion without pulmonary embolism, suggesting fluid overload. Laboratory results showed elevated CRP and normal troponin levels initially, which later increased, indicating myocardial involvement. Echocardiography revealed a severely dilated left ventricle with an ejection fraction (EF) of 31%, consistent with severely impaired systolic function. The cardiology team reviewed the patient and admitted to the Coronary Care Unit. As sign and symptoms were suggestive of fluid overload and congestive cardiac failure, management was done with diuretics, beta-blockers, angiotensin-converting enzyme inhibitors (ACE inhibitors), proton pump inhibitors, and supportive care. During admission, there was complications such as acute kidney injury, but then recovered well. Chest pain had resolved following the treatment. After being admitted for eight days, there was an improvement in the symptoms, and the patient was discharged home with a further plan of cardiac MRI and genetic testing due to a family history of sudden cardiac death. Regular appointment has been made with the Cardiology team to follow-up on the symptoms. Since discharge, the patient made a good recovery. A cardiac MRI was done, which showed severely impaired left ventricular function, ejection fraction (EF) of 38% with mild left ventricular dilatation, and no evidence of previous infarction. Overall appearance is of non-ischemic dilated cardiomyopathy. The main challenge at the time of admission was the non-availability of a cardiac radiology team, so the definitive diagnosis was delayed. The long-term implications include risk of recurrence, chronic heart failure, and, consequently, an effect on quality of life. Therefore, regular follow-up is critical in patient's management. Conclusions: Peripartum cardiomyopathy is one of the cardiovascular diseases whose causes are still unknown yet and, in some cases, are uncontrolled. By raising awareness about the symptoms and management of this complication it will reduce morbidity and mortality rates and also the length of stay in the hospital.

Keywords : cardiomyopathy, cardiomegaly, pregnancy, puerperium
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