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Case Report

An Interesting Case of Peripartum Cardiomyopathy with Mild Pre Eclampsia: Case Report

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Abstract

Peripartum cardiomyopathy (PPCM) is a dilated cardiomyopathy defined as systolic cardiac heart failure in the last month of pregnancy or within five months of delivery. Diagnosis of Peripartum cardiomyopathy is often missed, as it is a diagnosis of exclusion and the symptoms mimic physiological conditions associated with normal pregnancy. Overall prognosis is good in majority of the cases, although some patients may progress to irreversible heart failure. Early diagnosis is important and effective treatment reduces mortality rates and increases the chance of complete recovery of ventricular systolic function. We present a rare and interesting case of 20-year-old primigravida with mild pre eclampsia and peripartum cardiomyopathy, which was successfully managed, at our institute.

INTRODUCTION

PPCM is a syndrome with symptoms of heart failure and signs of left ventricular systolic dysfunction, which manifest between the last month of pregnancy and the first 5 months postpartum [1, 2]. Its incidence varies from 0.2% to 3% live births [3] and from region to region worldwide. A study of PCM was conducted at Kasturba Medical College Hospital, Manipal, with special reference to incidence and outcome. The incidence of PCM was 1 case per 1374 live births [4].

Risk factors include multiparity, black race, older maternal age, pre-eclampsia, and gestational hypertension [5,6]. Symptoms of PPCM, which include fatigue, edema, and dyspnea, are similar to those for the normal spectrum of peripartum states and pregnancy co-morbidities such as pulmonary emboli and eclampsia [7]. Therefore, diagnosis is often delayed and the disorder is under recognized, with devastating consequences: Mortality is as high as 20% to 50% [7].

We present an interesting case of peripartum cardiomyopathy successfully managed at our hospital.

CASE REPORT

A 20-year-old primi gravida presented to emergency department with 38 weeks of gestation with breathlessness. Patient had tachycardia, tachypnea and hypertension. Pulse rate was 104/ minute while blood pressure was 140/100 mm of Hg. Cardiac examination revealed murmur. Per abdomen examination revealed a term uterus, with contractions. Fetal heart sounds showed late decelerations. Per vaginal examination showed 3cms dilatation with premature rupture of membranes (PROM) and liquor was meconium stained.

Electrocardiogram showed sinus tachycardia. Echocardiography demonstrated features of dilated cardiomyopathy. Ejection fraction was 39 percent. Left ventricular dilation was present. No significant valvular involvement was noted.

Urine examination revealed albuminurea by dipstick method. Preoperative hemoglobin was 11-gram percent. Rest blood parameters were within normal limits. Patient was started on intravenous furosemide, antibiotics and decision for emergency caesarean section for fetal distress was taken. Caesarean section was done under general anesthesia. Patient withstood the procedure well. Post operatively patient was managed with intravenous antibiotics, diuretics, low molecular weight heparin, oral beta blockers and fluid restriction.

Post operative period was uneventful and patient gradually improved. Post operative echo demonstrated an improvement in ejection fraction to sixty percent. After 6 months, echocardiography showed no features of residual cardiac dysfunction.

DISCUSSION

Peripartum cardiomyopathy is a rare but critical disorder causing heart failure in women in late pregnancy or puerperium.

It was first described in 18th century but was recognized as a separate entity in 1930. The precise incidence in India is not known, an incidence of one case per 1374 live births has been reported from a tertiary care hospital in south India [8].

The definition of PPCM includes four criteria:

1) development of cardiac failure in the last month of pregnancy or within five months of delivery,

2) absence of an identifiable cause for the cardiac failure,

3) absence of recognizable heart disease before the last month of pregnancy, and 4) left ventricular(LV) dysfunction (ejection fraction of less than 45% or reduced shortening fraction) [2,9].

Our case fits into the definition as she presented in the last trimester, had recognized LV dysfunction on echocardiography without any other recognizable cardiac cause. She also had preeclampsia. However, our patient did not have the other risk factors as she was nulliparous and was of young age.

The treatment for PPCM is the same as for other forms of congestive heart failure (fluid and salt restriction, β-blocker, diuretic, and digoxin), except for angiotensin-converting enzyme inhibitors and angiotensin-receptor blockers, which are contraindicated in pregnancy [5].

Due to high risk of venous and arterial thrombosis anticoagulation with subcutaneous heparin should be instituted in these patients more so in bedridden patients, those with lVEF <35%, presence of atrial fibrillation, mural thrombi, obese patients and those with history of thromboembolism [8,10].

Our patient was treated with furesemide and was started on low molecular weight heparin, beta blockers, antibiotics and fluid restriction post operatively after caesarean section.

Although peripartum cardiomyopathy shares many features of other forms of dilated cardiomyopathy, an important distinction is that women with this disorder have a much higher rate of spontaneous recovery of left ventricular function on echocardiography in post partum period; nearly half of the women will normalize their ejection fraction during follow-up within six months [8].

However, in a study conducted by Suri et al., there were six (15.8 %) maternal deaths out of their 38 patients of DCM, and all of them had global hypokinesia on echocardiography and presented in NYHA class IV. Fetal outcome too depended upon maternal cardiac status. There were eight stillbirths and all the patients who had IUFD belonged to class IV. Twelve patients (40 %) had preterm delivery. Mean birth weight of babies was 2 kg [11].

In another study by Mcnamara et al., a prospective cohort with PPCM, most women recovered; however, 13% had major events or persistent severe cardiomyopathy. Black women had more LV dysfunction at presentation and at 6 and 12 months post-partum. Severe LV dysfunction and greater remodeling at study entry were associated with less recovery [12].

CONCLUSION

This paper highlights the need for prompt recognition of peripartum cardiomyopathy and treatment of same. The mortality rates are high if the condition goes unrecognized. With proper treatment, a good outcome can be achieved with literature reporting nearly half of the women normalizing their ejection fraction in six months follow up.

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