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RESEARCH ARTICLE

CASE REPORT: PERIPARTUM CARDIOMYOPATHY WITH EJECTION FRACTION OF 15%

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Abstract

Peripartum cardiomyopathy is a rare form of dilated cardiomyopathy that is seen during the last trimester of pregnancy or in the puerperal period. Its etiology is unknown and has a high mortality and morbidity rate.
We hereby report two such cases that we managed in our hospital.

INTRODUCTION

Peripartum cardiomyopathy is a form of dilated cardiomyopathy that occurs in the last trimester or in the postpartum period. The etiology is unknown and is known to have a high mortality and morbidity rate. Risk factors are multiparity and advanced maternal age. Peripartum cardiomyopathy is believed to occur due to some unknown primary myocardial disease that gets exacerbated during pregnancy. Future pregnancies are to be avoided in these patients.

CASE 1:
A 33yr old, Out-registered G3P2L2 with 36weeks pregnancy with previous 2 LSCS came referred from an outside clinic with complaints of dyspnea since 3 hours.

On examination, she was breathless with a pulse of 120/min and a BP reading of 130/90mmHg.Her SPO_2 was 90% on room air and a respiratory rate of 32/min. On auscultation bilateral coarse crepitations were heard.
Patient was immediately shifted to the intensive care unit and given respiratory support in the form of venturi mask. Intravenous furosemide 20mg was given.
An electrocardiography was done which showed left bundle branch block. We further investigated by getting a 2D Echo done which showed dilated left atrium and ventricle with an ejection fraction of 15%. An obstetric ultrasound was done which revealed a single live pregnancy of 36 weeks and an amniotic fluid index of 3 with rest of the normal findings.

Decision was taken to take the patient for an Emergency LSCS in view of previous 2 LSCS with dilated cardiomyopathy with severe oligohydramnios with maternal distress. It was done under general anesthesia and patient was shifted back to the ICU post operatively. On 1st post operative day patient was extubated.
Patient was started on T.Carvedilol 3.125mg HS and T.Digoxin ½ 0.25mg OD. Patient was given Inj.Ceftriaxone 1gm IV 12hrly and Inj. Metronidazole 500mg IV 8hrly.

Post-op period was uneventful. Stitch removal was done on 10th post-operative day. Prior to discharge 2D Echo was repeated which showed and LVEF of 45% with Grade 1 MR. With the opinion of the cardiologist digoxin was stopped and patient was sent home on T.Carvedilol 3.125mg HS.

CASE 2:
A 23-year, Registered Primigravida with 39week 4 days pregnancy came with complaints of acute onset breathlessness since last 2 hours with difficulty to breathe even on sitting. On examination, patient was breathless. Her pulse was 112/min and BP was 120/86mmHg. Her SPO_2 was 86% on room air with a respiratory rate of 38/min. On auscultation bilateral crepitation were heard. Patient was given IV furosemide 20mg and shifted to the ICU. Her 2D Echo showed an ejection fraction of 15%.
Patient was in labour and had cephalopelvic disproportion.

Decision was taken to take the patient for an Emergency LSCS in view of acute onset dyspnea with cephalopelvic disproportion. LSCS was done under general anesthesia was uneventful and patient was shifted back to the ICU. Patient was extubated on 2nd post operative day. Patient was started on T.Carvedilol 3.125mg BD and T.Digoxin 0.25mg OD (5/7 days). Patient was given Inj.Ceftriaxone 1gm IV 12hrly and Inj. Metronidazole 500mg IV 8hrly.
Stitch removal was done on 11th post-operative day and discharged. Prior to discharge 2D Echo was repeated which showed an ejection fraction of 15%. She was advised to continue medications and follow up after one month for repeat 2D echo.

DISCUSSION:

These cases are reported for their rarity.Peripartum cardiomyopathy is a rare but potentially fatal cardiac disease with unknown etiology. It is difficult to differentiate it from normal physiological changes of pregnancy and other pregnancy complications like preeclampsia, myocarditis etc. Establishing the diagnosis of PPCM relies on a high index of suspicion as it can present dramatically with acute heart failure.

It is defined on the basis of four criteria a) development of cardiac failure in the last month of pregnancy or within five months of delivery. b) Absence of identifiable cause of heart failure. c) Absence of recognizable heart disease prior to last month of pregnancy. d) Left ventricular systolic dysfunction shown on echocardiography; ejection fraction of less than 45% or M mode fractional shortening of less than 30% or both and end- diastolic dimension more than $2.7cm/m^{2.}$
Treatment is aimed at maintaining the left ventricular function and allowing for other symptoms to resolve spontaneously. Possible complications include cardiac arrhythmias, congestive heart failure and pulmonary emboli and death.

We had to perform caesarean section in both of the cases for obstetric indication. Pre operative optimization of the patient by the anesthesia team and good multidisciplinary post operative care in ICU resulted in successful outcome.

Conclusion:

The cases reported here show that with high index of suspicion, prompt diagnosis and intensive care Peripartum cardiomyopathy can be handled with successful outcome.

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