



CARDIAC ARREST IN PATIENTS WITH PERIPARTUM CARDIOMYOPATHY AND PREECLAMPSIA WITH SEVERE FEATURES

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BACKGROUND

Peripartum cardiomyopathy (PPCM) is a rare secondary heart failure due to systolic ventricular dysfunction that occurs in late pregnancy to several months postpartum. The mortality rate of PPCM is quite high at 30-60% of all cases. Moreover, most PPCM survivors also have a high risk of developing heart failure again in their next pregnancy. However, the diagnosis of PPCM is challenging because the early signs and symptoms of PPCM resemble those of normal pregnancy.

Preeclampsia (PE) is one of the risk factors for PPCM. Recognition of risk factor of PPCM is important to help the early diagnosis and appropriate management of PPCM. Delayed management of PPCM would case a progressive disease that require heart transplantation and death.

Here we report a 44-year-old multigravida woman who died of complications from PPCM during her pregnancy.

CASE REPORT

A 44-year-old woman G4P1112 with a gestational age of 38 weeks 5 days presented to emergency room with labor pain since 2 hours earlier. The patient also had of shortness of breath since 16 weeks of gestation. She had a history of hypertension since 35 weeks of gestation. The patient had stopped using the combined oral contraceptive pill 1 year ago. The patient had routine antenatal care (ANC) at the obstetrician during this pregnancy. Other complaints such as headache, heartburn, and blurred vision were denied.

35 Weeks of Gestational Age (Cardiology Clinic)

1st echocardiography study (mitral regurgitation, global hypokinetic, and an EF of 21%) and had high blood pressure

38 Weeks of Gestational Age (Emergency Room)

- **Physical Examination:** Blood pressure 160/110 mmHg and a heart murmur was found
- **Obstetric examination:** fetal heart rate 144 bpm, uterine contraction 2-3 times in 10 minutes, cervical dilatation 2 cm
- **Supportive examination**
 - **Laboratory examination** (leukocytosis, increased serum creatinine, +3 proteinuria)
 - **2nd echocardiography study** (left atrial and ventricular dilatation with an EF 19%)
 - **Cardiotocography** (no fetal distress)

Diagnosis : G4P1112 38 Week 5 Days, PE with a Severe Features, Chronic Heart Failure (CHF) Functional Class (FC) III due to PPCM (EF 19%) and Mild Mitral Regurgitation, 1st Stage of Labor, EFW 2625 gr

Treatment :

- **Pharmacological :** Standard MgSO₄ regimen for PE with severe feature, 10 mg nifedipine PO, 40 mg furosemide IV, 2.5 mg Bisoprolol PO
- **Caesarean section** (a vigorous female baby born) → Patient transferred to ICU → Using mechanical ventilation

The patient died 2 hours after the caesarean section

DISCUSSION

PPCM is rare idiopathic cardiomyopathy characterized by secondary heart failure that occurs in the last few months of pregnancy to 5 months postpartum and no other causes of heart failure are found. Although left ventricular dilatation is not always found, the EF of PPCM patients is almost always below 45%. The process of adaptation of the heart to physiological changes that occur during pregnancy may change due to PPCM or hypertension in pregnancy. The diagnosis of PPCM must be done as early as possible. The decision and timing of pregnancy termination are very important in the management of PPCM. If the mother is hemodynamically unstable or there is fetal distress, termination of pregnancy should be carried out immediately regardless of gestational age.

CONCLUSION

PPCM was a rare yet fatal cardiomyopathy in pregnant women. The diagnosis of PPCM exclusively done by excluding other cause of heart failure. Thus, that early recognition and timely treatment are very important in determining the outcome of PPCM.

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