Journal of Indian Academy of Obstetrics and Gynaecology July 2023
Vol. 5, Issue 1

Case Report

PERIPARTUM CARDIOMYOPATHY IN A CASE OF POST OPERATIVE ECTOPIC PREGNANCY

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ABSTRACT

Peripartum cardiomyopathy (PPCM) is a rare, poorly understood form of congestive heart failure that can be life-threatening for mothers. It typically occurs in the last month of pregnancy or in the months following delivery, with reduced heart pumping function (ejection fraction <45%). It has an estimated mortality rate of 6-10% in the United States. This case describes a 27-year-old female with a suspected ectopic pregnancy, which was successfully treated with surgery. However, she later developed cardiac symptoms and was diagnosed with PPCM. Treatment involves a multidisciplinary approach, medication, and sometimes bromocriptine. Proper management is crucial to prevent adverse outcomes, including maternal mortality.

Key Words: Peripartum, Cardiomyopathy, Ejection fraction

INTRODUCTION

Peripartum cardiomyopathy is a rare form of congestive heart failure of unknown etiology but one of the major causes of maternal death. The estimated mortality rate associated with peripartum cardiomyopathy in the United States is 6% to 10%.[1] AHA criteria for diagnosis peripartum cardiomyopathy - Heart failure develops in the last month of pregnancy or within months following delivery, heart pumping is reduced, with a left ventricular ejection fraction less than 45% (typically measured by an echocardiogram), no other cause for heart failure can be found. The incidence of peripartum cardiomyopathy was 1 case per 1374 live births[2]. Clinical presentation of peripartum cardiomyopathy resembles DCM with systolic HF including fatigue, dyspnea, orthopnea, paroxysmal nocturnal dyspnea, leg edema, neck vein engorgement, pulmonary crackles, hepatic congestion, and third heart sound.[3]

CASE

A 27-year-old athlete female, resident achalasia, West Bengal, primi-gravida, having a non-consanguineous marriage, belonging to middle socio-economic class, presented to emergency department on11th June,2023 with the chief complain flower abdominal pain and per vaginal bleeding for

last 2 days after amenorrhea of 6 weeks 5 days. There was no history of abortifacient intake. She attended menarche at 14 years age and used to have regular menstrual cycle at a interval of 30 days for 5-6 days with moderate flow.

Her last menstrual period (LMP) was on 26th April, 2023 and expected date of delivery was on 2ndFebruary, 2024. Her estimated gestational age by LMP was 6 weeks 5 days. There was no Ultrasound report available. No history of contraception in her last 2 years of marriage.

There was no significant medical history of cardiac diseases, respiratory diseases, tuberculosis, diabetes mellitus, hypertension, thyroid disorders in patient or in her Family.

She did not give any history of surgery performed previously. There was no history of blood transfusion or drug allergies.

GENERAL EXAMINATION

Patient was examined on admission after obtaining proper informed consent. She was conscious, alert, cooperative, cold and clammy extremities, moderately built and nourished. She had severe pallor but no icterus/ edema/ clubbing / cyanosis. She was afebrile with axillary temperature 97F, Pulse rate 110 bpm, regular, high volume, no radio-radial or radio- femoral delay. Blood pressure 90/60 mmHg in supine position.

SYSTEMIC EXAMINATION

No abnormalities detected in Respiratory, Cardiovascular or central nervous system on admission.

OBSTETRICAL EXAMINATION

Abdominal examination revealed guarding rigidity along with diffuse tenderness over hypogastric region. Fresh blood was found in peritoneal cavity by paracentesis, which does not get clotted even after 10 min.

On per vaginal examination, uterus was found to be of 6-8 weeks size approximately, ante-verted, cervical motion tenderness noted, cervical Os closed, mild bleeding was found to be present.

In ER urine pregnancy test was done which was found to be positive.

So, she was suspected as rupture ectopic pregnancy and planned for exploratory laparotomy.

Exploratory laparotomy followed by left salpingectomy successfully done after identifying left sided tubal rupture ectopic pregnancy and about 1- 1.5 L of blood was suctioned from peritoneal cavity. She was then transferred to the Intensive Care Unit. The patient received two units of red blood cells. The post transfusion hemoglobin level was 11 g/dL.

Post operative period was initially favourable, then, after 11 hours, the patient developed shortness of breath. Physical examination showed tachypnoea (33/min) and tachycardia(106/min), blood pressure

82/50 mmhg, Cardiac auscultation was normal but pulmonary auscultation revealed bilaterally crackles. Her Trop T was negative. Moist oxygen and nebulization given; inotropic support was initiated.

The ECG revealed sinus tachycardia. Transthoracic echocardiography (TTE) revealed left ventricular (LV) systolic dysfunction with regional wall motion abnormality, mid global hypokinesia and mild concentric left ventricular hypertrophy. Ejection fraction of the LV was 46%.

Proper intensive monitoring and diuretics (Torsemide and Spironolactone tablets) was given once daily after consulting with medicine specialist. After stabilization patient was referred to cardiologist for further follow up.

DISCUSSION

Peripartum cardiomyopathy is uncommon, but serious medical condition. The ethology is not fully understood, but both genetic susceptibility and hormonal influences play major role. For assessment of decreased cardiac systolic function an elevated NT-pro-BNP level, an echocardiogram is essential with clinical symptoms. Multidisciplinary collaboration with a cardio-obstetrics team is necessary for prompt treatment and to prevent adverse outcome[4]. Management of peripartum cardiomyocyte path include e a low sodium diet, fluid restriction, bed rest along with medication for heart failure which is the mainstay of treatment. Bromocriptine, a dopamine D2 agonist, can be used as an adjunctive treatment which has controversial benefits. The addition of bromocriptine to standard HF treatment is associated with significantly higher survival and higher LVEF improvement.[5] Variable outcomes of peripartum cardiomyopathy include complete recovery, persistent heart failure, arrhythmias, thromboembolic events, and even death. Also risk of relapse and death in subsequent pregnancy, if there is incomplete myocardial recovery.[6]

CONCLUSION

Peripartum cardiomyopathy following 1st trimester pregnancy loss is rare but potentially life-threatening disease. Clinical diagnosis can be confirmed by echo-cardiography. Early diagnosis, prompt and specific treatment, cardiac consultation is need. If it is not diagnosed and managed properly on time, can lead to maternal mortality and morbidity.

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Received: 23.05.2023
Revised: 30.05.23
Accepted: 14.06.2023
Published: 15.07.2023
Citation: Hany U, Bandopadhyay P, Debnath A, Saha S. Peripartum cardiomyopathy in a case of post operative ectopic pregnancy. J Indian Acad Obstet Gynecol. 2023;5(1):42-45.

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