Journal of Obstetrics and Gynecological Problems

Case Report

Dhamangaonkar B, et al. J Obstet Gynecol Probl: JOGP 100007

Peripartum Cardiomyopathy a Rare Case

Dhamangaonkar B[1*], Nanotkar S[2], Mahajan A[3], Kalane A[4], Khamkar K[5], Desai S[6], Deshmukh S[7], and Pandve HT[8]

[1]Department of Obstetrics and Gynaecology, Ruby Hall Clinic, India

[2]Department of Obstetrics and Gynaecology, Ruby Hall Clinic, India

[3]Department of Obstetrics and Gynaecology, Ruby Hall Clinic, India

[4]Consultant Chest Physician,Ruby Hall Clinic, India

[5]Consultant Physician,Ruby Hall Clinic, India

[6]Consultant Physician and Intensivist,Ruby Hall Clinic, India

[7]Consultant Physician and Intensivist,Ruby Hall Clinic, India

[8]Department of Community Medicine, ESIC Medical College, India

[*]**Corresponding author:** Bhakti Dhamangaonkar, Department of Obstetrics and Gynaecology, Ruby Hall Clinic, India, Tel: 9503734459; Email: maslekarbhakti@gmail.com

Citation: Dhamangaonkar B, Nanotkar S, Mahajan A, Kalane A, Khamkar K, et al. (2019) Peripartum Cardiomyopathy a Rare Case. J Obstet Gynecol Probl: JOGP 100007

Received date: 07 November, 2019; **Accepted date:** 14 November, 2019; **Published date:** 06 December, 2019

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. though it was first described in the 1800s, yet its etiology is still unclear. 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). Peripartum cardiomyopathy is a relatively rare disease, which can have devasting consequences and should be promptly identified and correctly treated. We report of a rare case of Peripartum cardiomyopathy in primigravida with diabetes and hypertension.

Keywords: **Haemoglobin; Peripartum Cardiomyopathy; Pregnancy**

Case Report

A 29-year-old primigravida, known overt diabetic and hypertensive was admitted to hospital for elective LSCS at 38 weeks of gestation. Patient was obese. She was diagnosed with diabetes mellitus type 2, 8 months prior to conception. At the time of diagnosis, her HbA1c was 10.5. Her FBS was 229 and PPBS was 354. She was not taking any medications for diabetes. Her haemoglobin, thyroid was normal and remained normal throughout pregnancy. She was tested negative for HIV, HBSag and VDRL. Her ophthalmological examinations were also normal. She had one episode of fever and URTI during 1sttrimester. At the time of conception, her FBS was 111 and PPBS was 192. HbA1c was 7.6. She was treated with novarapid insulin subcutaneously 4 unit before breakfast and 4 unit before lunch. During 2ndtrimester, her insulin requirements rose to 8 unit novarapid insulin before breakfast and before lunch and 10 units with dinner. During 3rdtrimester, she needed 10-10-12 insulin with meals till the time of delivery[1-4].

- She had undergone NT scan at 13 weeks GA which showed NT 1.7 mm. (normal).
- Anomaly scan (18 weeks)- no anomaly.
- Quadruple marker test (18 weeks)-revealed low risk for trisomy 21, trisomy 18 and open neural tube defects

- Fetal echo at 27 weeks GA which was normal.
- Obstetric Doppler at 36 weeks' gestational age which indicated that patient had polyhydramnios (AFI 25.75cm). EFW 3008 gm. Diastolic noth in both uterine arteries. Fetoplacental circulation was normal.

Patient was treated with tablet ecosprin 75mg till 36 weeks GA. Iron and calcium supplements and insulin throughout pregnancy. She was given injection dexamethasone 4 doses at 28 weeks of gestation. She developed gestational hypertension in 37th week of pregnancy for which she was treated with tablet labetalol 50 mg BD. Her pre op investigations were normal except for she had UTI (15-20 pus cells in urine routine and microscopy)

On the day of LSCS, she was kept on injection insulin human actrapid 10 unit with DNS at 16 drops per minute (neutralising drip). RBS charting was done every 2 hours. Intraoperative period was uneventful. Patient delivered female child, 3.38 kg, apgar score 8 (1 min), 9 (5 min).

As soon as patient was shifted to complete oral diet on second day post op period, she was kept on insulin 6U-6U-6U with meals. Insulin dose was titrated up to 10 U- 8U- 14 U with meals till discharge according to 7-point sugar profile. Tablet lobet was continued in dose of 50 mg BD on which her BP was well maintained in range of 130/90 to 150/90. On day 2 post LSCS, patient developed fever. She had complaints of difficulty in deglutition, backache, headache, cold. Treatment for URTI was started. To which patient responded well. On 3rd day post op, patient started complaining of breathlessness on rest, cough with expectoration. Her pedal edema was increased. She developed facial puffiness as well. Her BP was 150/110 mmhg, her respiratory rate was 38/minute and she had basal creptitations on auscultation. Her saturation was 88% on room air. Immediately, physician and chest TB expert opinion was taken. Injection Lasix 20 mg stat dose was given. Since, peripartum cardiomyopathy was suspected, patient was shifted to ICU for observation and treatment.

She was treated by oxygen inhalation at 1L/min. patient maintained saturation 95-96% with oxygen. Injection Lasix was started in dose of 20 mg TDS. Her ABG showed respiratory acidosis compensated by metabolic alkalosis. Her antibiotic was changed from oral tablet Taxim O 200 mg BD to injection piptaz 4.5 gm 8 hourly. Piptaz was continued for 10 doses. Initially, patient was given injection monocef 1gm 12 hourly for 3 doses, injection metro 8 hourly for 3 doses, injection gentamycin 80 mg iv12 hourly 2 doses on 1st day post op. Dose of tablet lobet was up titrated to 100 mg BD. Her BP was still uncontrolled. Hence, she was shifted on T. carvidilol 3.125 mg BD. Tablet stamlo 5 mg OD was added to treatment for further control of BP. Tablet lobet was stopped. Her echo report was s/o global LV hypokinesia, LVEF 50%, mild LV systolic dysfuncton, intact septa. Strict input/output monitoring was done to see that output should exceed input. Patient improved on day 3rd of ICU treatment. With treatment, patient's breathlessness was gone, pedal edema subsided, facial puffiness was also gone. Eventually she was discharged on injection insulin 10U-8U-14U with meals, tab cardivas 6.25 mg BD, tab stamlo 5 mg OD, sypkesol 10 ml BD and other supportive treatment with fair control of BP, diabetes and CCF. Baby was shifted to NICU for hyperbilirubinemia. Baby received phototherapy. Baby was also discharged with mother after vaccination.

Discussion

Peripartum cardiomyopathy (PPCM) is a rare, but life-threatening disease, which affects women in the last month of pregnancy or in the first 5 months after delivery. PPCM is a form of Dilated Cardiomyopathy with left ventricular systolic dysfunction that results in signs and symptoms of heart failure. Symptoms usually occur in the last trimester and diagnosis is usually made in the peripartum period. Peripartum cardiomyopathy usually presents with symptoms of worsening cardiac failure. These include dyspnoea on exertion, fatigue, ankle oedema, embolic phenomena, atypical chest pains and haemoptysis. Examination may reveal evidence of a raised CVP, tachycardia, cardiomegaly with a gallop rhythm (S3), mitral regurgitation, pulmonary crackles and peripheral oedema. Symptoms like decreased exercise capacity, tiredness, dyspnoea, orthopnoea and palpitations may occur even in normal pregnancy and can be mistaken for a diseased state. Kotekar et al reported a case of peripartum cardiomyopathy posted for caesarean section [5]. Chan and NganKee presented a case of PPCM at 18 weeks' gestation. She was managed medically with systemic anticoagulation, until 31 weeks, when fetal distress and maternal liver dysfunction forced an emergency caesarian section [6]. Shrestha B.R. et al reported a case of PPCM with ejection fraction of 18% brought for emergency caesarian section. It had a successful outcome using epidural with Lignocaine 2% and Adrenaline [7].

Conclusion

Peripartum cardiomyopathy (PPCM) is a relatively rare disease, which can have devasting consequences and should be promptly identified and correctly treated. Early diagnosis is important and therefore women who develop symptoms of heart failure during pregnancy or shortly after should be investigated for this condition. Effective treatment reduces mortality rates and increases the chance of complete recovery of ventricular systolic function.

References

1. Wang M (2009) Peripartum cardiomyopathy: case reports. Perm J 13: 42-45.
2. Demakis JG, Rahimtoola SH, Sutton GC, Meadows WR, Szanto PB, et al. (1971) Natural course of peripartum cardiomyopathy. Circulation 44: 1053-1061.
3. Pearson GD, Veille JC, Rahimtoola S, Hsia J, Oakley CM, et al. (2000) Peripartum cardiomyopathy: National Heart, Lung, and Blood Institute and Office of Rare Diseases (National Institutes of Health) workshop recommendations and review JAMA 283: 1183-1188.
4. Cemin R, Janardhanan R, Daves M (2009) Peripartum cardiomyopathy: An intriguing challenge. Case report with literature review. CurrCardiol Rev5: 268-272.
5. Kotekar N, Nagalakshmi NV, Chandrashekar (2007) A rare case of peripartum cardiomyopathy posted for caesarean section. Indian J Anaesth 51: 60-64.
6. Chan F and NganKee WD (1999) Idiopathic dilated cardiomyopathy presenting in pregnancy. Can J Anesth 46: 1146-1149.
7. Shrestha BR and Thapa C (2006) Peripartum cardiomyopathy undergoing caesarean section under epidural anaesthesia. Katmandu University Med J 4: 503-505.

Citation: Dhamangaonkar B, Nanotkar S, Mahajan A, Kalane A, Khamkar K, et al. (2019) Peripartum Cardiomyopathy a Rare Case. J Obstet Gynecol Probl: JOGP 100007