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Case Study

A SUCCESSFUL PREGNANCY OUTCOME IN AN INFERTILE WOMAN WITH TUBERCULAR CONSTRICTIVE PERICARDITIS

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ABSTRACT

Pericardial diseases during pregnancy are sporadic; however, proper diagnosis and management are crucial for the successful outcome of the pregnancy. It is often difficult to diagnose due to low clinical suspicion and high mortality. This case is presented as an infertile woman who underwent pericardiectomy for tubercular pericarditis, conceived spontaneously and had a successful pregnancy outcome even after recurrent episodes of pericarditis. The general outcome of patients with recurrent pericarditis is good, especially when multidisciplinary teams manage patients in tertiary settings.

Keywords: Pericardiectomy pericardiectomy, Tuberculosis, Tuberculosis constrictive pericarditis, Constrictive pericarditis pregnancy

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INTRODUCTION

Pericardial diseases during pregnancy are sporadic and pregnancy doesn't increase the susceptibility to pericardial diseases. The outcome of pregnancies in patients with pericardial diseases is the same as in the general population; however, early diagnosis and management are important. Tubercular pericarditis accounts for 4% of acute pericarditis, 7% of cardiac tamponade and 6% of constrictive pericarditis cases [1]. The causative organism, Mycobacterium tuberculosis, usually involves the pericardium by retrograde lymphatic spread or by hematogenous spread of a primary TB infection [2].

Constrictive pericarditis is a rare disease and is caused by the thickening of the pericardium. It results in diastolic dysfunction as the filling of the heart is impeded by the constricted pericardium surrounding the heart. It's a progressive disease and results in symptoms related to fluid overload and reduced cardiac output. Pericardiectomy is the definitive treatment for CCP (chronic constrictive pericarditis). Surgical pericardiectomy can lead to dramatic improvements in symptoms and quality of life [3, 4]. Limited information is available to guide the management of pericardial disease during pregnancy and only the absolutely necessary medications should be given.

CASE REPORT

A 39-year-old primigravida was admitted with 28 w pregnancy after spontaneous conception. She complained of respiratory distress, chest pain, palpitation and pedal oedema. She was married for 19 y and had primary infertility for which she was taking treatment from local doctors. Detailed history revealed tubercular constrictive pericarditis 2 y back for which she underwent pericardiectomy. She took antitubercular therapy (ATT) for 6months. One year back, she had an attack of cerebrovascular accident (CVA) along with facial palsy but recovered completely. She was put on tab aspirin 75 mg once daily, which she stopped herself after becoming pregnant.

The blood pressure was 120/84 mmHg, pulse rate was 120 beats/min and oxygen saturation was 94%. Laboratory tests showed Hb 9 gm%, TLC 6000, platelet count 1.2 lakhs/lt. ECG was normal. ECHO showed a left ventricular ejection fraction of 60% with mild MR. Recurrent pericarditis was managed with paracetamol. She was diagnosed with gestational diabetes during her hospital stay and was managed with medical nutrition therapy.

Obstetric examination revealed 28 w singleton live fetus. She was kept on close follow-up by a team of cardiologists and obstetricians. She was again admitted at 34 w with uncontrolled sugar levels. Tab metformin 500 mg thrice daily was started along with dietary modification. She underwent elective cesarean section at 38 w and gave birth to a healthy baby girl weighing 2.5 kgs.

DISCUSSION

Tuberculosis can involve any organ in the body, with the lungs being the commonest. The evidence available doesn't suggest that pregnancy increases susceptibility to pericardial diseases. However, when such a condition occurs, its early management is important for the successful outcome of the pregnancy. Tuberculosis accounts for less than 5% of pericarditis cases in developed countries but is still a major cause in developing countries [5]. Tuberculous pericarditis carries a high mortality rate (17-40%) [6].

Regarding pericardial effusion, it has been reported most commonly during the third trimester, followed by the second trimester and causes can be idiopathic, systemic lupus erythematosus, tuberculosis, HIV, etc. But in developing countries, tuberculosis is most common. In general, pericardial effusions in pregnancy are asymptomatic and resolve spontaneously without therapy. Hospitalization is required if the patient becomes symptomatic or develops physiologic impairment.

Management of most pericardial disorders is the same during pregnancy as is in the general population. However, colchicine is to be avoided in pregnancy and diagnostic/therapeutic pericardiocentesis should be performed only if absolutely necessary. Pericardiocentesis is usually performed under echocardiographic guidance instead of fluoroscopic guidance to avoid fetal X-ray exposure.

Early constrictive pericarditis is poorly tolerated in pregnancy and should be managed promptly in females planning for pregnancy [7]. Pericardiectomy is generally advised only for significant pericardial constriction and resistant bacterial infections. Delivery of normal infants in the term after pericardiocentesis or pericardiectomy is expected whenever the natural history of causative disease allows. Pericardiectomy itself is not a contraindication for subsequent successful pregnancies.

Brucato A. showed that pericarditis generally has a good prognosis with event rates similar to nonpregnant women and the outcome is

more correlated to the underlying etiology rather than pericarditis itself [8].

Management of acute pericarditis in pregnancy includes aspirin being gradually stopped at 20 w of gestation, plus adding low dosages of prednisone if needed throughout pregnancy and lactation, especially for recurrent cases followed by very gradual tapering after delivery [9]. In patients with a previous history of pericardial disease, pregnancy should be planned in a phase of stable remission. Specific precautions include withdrawal of colchicine before conception and starting with aspirin and low-dose prednisolone. Recurrence rates were around 20-25%. Our patient had recurrent pericarditis at 28 w of gestation, which was managed conservatively.

CONCLUSION

The general outcome of patients with recurrent pericarditis is good, especially when multidisciplinary teams manage patients in tertiary settings. This case highlights the importance of early diagnosis of tubercular pericardial disease and management with an antitubercular treatment that might have corrected her undiagnosed genital tuberculosis and helped in conception.

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AUTHORS CONTRIBUTIONS

All the authors-Krishna Dahiya, Isha Nandal and Roopa Malik, have equally made a substantial contribution to the conception, acquisition of data, interpretation of data and drafting of the article.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest.

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