

INTRODUCTION : Cardiovascular diseases are a significant cause of maternal morbidity and mortality, accounting for 20.5 % of pregnancy-related deaths in India. The interplay between heart disease and pregnancy is complex, with increased cardiac output, plasma volume, and hormonal changes creating unique challenges. This report details a case of a 20-year-old primigravida with undiagnosed patent ductus arteriosus (PDA) and mitral regurgitation (MR), highlighting the management of heart disease in pregnancy.

OBJECTIVES:1. To assess the effects of pregnancy on pre-existing heart conditions.

2. To analyze the management strategies for heart failure in pregnancy.

CASE OPERATION PROCEDURE:A 20-year-old primigravida at 37 weeks and 1 day of gestation presented with NYHA Grade IV dyspnea. Diagnosed with PDA and MR during her second trimester, first time while she presented with features of cardiac failure, she had a history of treatment discontinuation and two episodes of heart failure during pregnancy. The patient exhibited orthopnea, engorged neck veins, **raised JVP**, and a **continuous machinery murmur in the left infraclavicular region**. Investigations revealed **elevated NT-proBNP levels**, cardiomegaly on chest X-ray, and **left ventricular dysfunction with a reduced ejection fraction (35%) on echocardiography** . Multidisciplinary care was provided with oxygen therapy, diuretics, and metoprolol.Labor was managed under close monitoring with minimal straining, supplemented by forceps-assisted delivery to shorten the second stage. An assisted vaginal delivery resulted in a 1.5 kg live baby. Postpartum care was uneventful.

DISCUSSION : Pregnancy exacerbates pre-existing heart conditions due to increased cardiac output and plasma volume, peaking during the second trimester. This patient's large PDA and MR led to repeated episodes of heart failure and progressive dyspnea. Symptoms of normal pregnancy (fatigue, dyspnea) overlap with heart disease, necessitating detailed evaluation.Labor and delivery pose additional risks due to the hemodynamic changes and increased cardiac workload .Early multidisciplinary care involving cardiologists, obstetricians, and anesthesiologists is critical . Vaginal delivery is preferred unless contraindicated by severe cardiac and obstetric conditions.Postpartum monitoring is vital due to the risk of heart failure from blood volume shifts.

CONCLUSION : This case underscores the importance of early diagnosis, regular antenatal care, and multidisciplinary management for pregnant women with heart disease. Proper labor planning and postpartum monitoring are essential to ensure favorable maternal and fetal outcomes.

REFERENCES : Williams' Textbook of Obstetrics and Gynecology, Journal of medical sciences

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