Management of a Pregnant Patient With Idiopathic Dilated Cardiomyopathy

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Introduction: Dilated cardiomyopathy (DCM) is the third leading cause of heart failure and the most frequent cause of heart transplantation.\(^1\) The cardiovascular changes of pregnancy places patients with DCM at increased risk for significant morbidity and mortality during pregnancy and cesarean delivery. We report the management of a patient with severe left ventricular (LV) systolic dysfunction and LV thrombus.

Case Report: A 26-year-old primigravida with morbid obesity (BMI = 53) and gestational diabetes mellitus at 28 weeks gestation presented to an outside hospital with a 3 month history of progressively worsening lower extremity edema, dyspnea on exertion, orthopnea, and paroxysmal nocturnal dyspnea. Her family history was significant for paternal and fraternal DCM. She was subsequently diagnosed with DCM complicated by acutely decompensated heart failure and was transferred to our institution. An echocardiogram revealed severe LV dysfunction (EF<15%), right ventricular dysfunction, a 1.2 x 1.6 cm LV thrombus, and moderate tricuspid regurgitation. She was admitted to the cardiac care unit (CCU) and was treated with intravenous diuretics, afterload reducers and heparin anticoagulation. The patient responded favorably to treatment and plans were made by a multidisciplinary team for a cesarean delivery and bilateral tubal ligation at 32 weeks gestation. Following placement of standard monitors and a radial arterial line, a combined spinal-epidural (CSE) was performed with the intrathecal administration of 2.5 mg plain bupivacaine and 25mcg of fentanyl. Central venous access was obtained via the right internal jugular vein and a PA catheter was introduced. The left femoral artery and right femoral vein were cannulated in preparation for possible emergent ECMO. Prior to surgical incision the epidural catheter was bolused with 2.5 mg increments of plain bupivacaine to obtain a T4 sensory level. The intraoperative course was uneventful and the patient was transported to the CCU for monitoring. On postoperative day (POD) 1 she had an acute decompensation with a significant drop in her cardiac index. She also developed asymptomatic episodic ventricular tachycardia. She was successfully managed with nitroprusside and milrinone infusions and was discharged home on POD 9 with oral medications and a wearable cardioverter defibrillator.