Introduction: Heart failure in pregnancy can have many causes. The etiology is difficult in patients with multifactorial disease. Morbidity and mortality can be high as in peripartum cardiomyopathy (PPCM), where mortality can be as high as 85% if PPCM does not improve(1). We present a case of successful anesthetic management of a repeat cesarean delivery in a patient with acute onset of cardiomyopathy superimposed with chronic hypertension, preeclampsia, and cocaine use.

Case Presentation: A 40-year-old parturient, gravida 4, para 2 at 36+1 weeks gestational age transferred to us for management of severe preeclampsia and acute onset shortness of breath. At the outlying hospital, the patient had blood pressures of 200/110 and urine toxicology positive for cocaine. Her history included hypertension, asthma, anemia, obesity, prior cesarean delivery, vaginal birth after cesarean, A1 diabetes mellitus, and breech presentation. Upon examination the patient had bibasilar rales, a holosystolic cardiac murmur, and lower extremity edema. Chest x-ray revealed bilateral pulmonary edema. Our laboratory findings were significant for urine toxicology negative for cocaine and an elevated serum troponin level. A transthoracic echocardiogram (TTE) showed an ejection fraction (EF) of 34%, global hypokinesis, moderate mitral regurgitation, moderate tricuspid regurgitation, and right ventricular systolic pressures of 51 mm Hg. Anesthetic management was challenging due to depressed EF, history of cocaine use, and preeclampsia, but was accomplished with arterial blood pressure monitoring, lidocaine epidural, postoperative hydromorphone epidural, and intensive care monitoring. The patient had successful cesarean delivery and was discharged on postoperative day five with medical management. Interestingly, the patient presented one month later with chest pain and was found to have a defect on a resting nuclear medicine study. Cardiac angiography revealed vasospasm of the left anterior descending coronary artery. No significant stenosis was found. A follow-up TTE two months later showed EF of 66% and no significant valvular dysfunction.

Discussion: When acute heart failure presents in parturients, successful management can be difficult if the etiology is unknown. Our case represents successful cesarean delivery of a parturient with acute cardiomyopathy from several possible factors including pregnancy, hypertension, and cocaine use. PPCM is high on our differential, but is not certain. The risks of PPCM include advanced maternal age, multiparity, black race, multiple gestation, obesity, preeclampsia, and chronic hypertension(2). Many of these risks, by themselves, can be the cause of heart failure. Nevertheless, proper anesthetic management of heart failure can lead to a successful outcome.

Reference: