Transesophageal Echocardiogram For Anesthetic Management Of A Patient With Severe Mitral Valve Regurgitation And Cardiomyopathy Presenting For Cesarean Section

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Introduction: We report a case involving the use of TEE to guide anesthetic management during cesarean section for a patient with severe mitral regurgitation and cardiomyopathy.

Case Report: 27 year old female G3 P0201 presented at 33 4/7 wks gestation with complaints of shortness of breath and worsening peripheral edema. Patient had a history of morbid obesity, long-standing HTN and preeclampsia with a previous pregnancy. After hospital admission a transthoracic echocardiogram revealed that the patient had a moderately dilated left ventricle, severe LVH, severe mitral regurgitation and severe LV systolic dysfunction with an EF of 20-25%. The patient developed uncontrollable HTN and was eventually diagnosed with superimposed preeclampsia. Due to the inability to adequately control the patient's blood pressure it was determined the patient would require cesarian section at 35 5/7 wks. Due to the patient's severe MR and cardiomyopathy it was deemed necessary to monitor the patient's fluid status and myocardial contractility closely throughout her procedure. Pulmonary artery catheter would normally have been a viable option but in light of the patient's severe valvular disease other modalities were explored. Therefore, the patient had a repeat cesarian section performed under general endotracheal anesthesia with standard ASA monitors, arterial line, central venous access and transesophageal echocardiography. With the TEE we were able to better guide our fluid therapy and maximize our cardiac output. Intraoperative fluid boluses were given several times over the two hour case and no inotropic intervention was required. The patient tolerated the procedure well and was discharged one week later without further incident.

Conclusion: PA catheter data is inaccurate when used in the face of severe MR. In these situations intraoperative TEE can be utilized to provide accurate and immediate feedback regarding a patient's cardiac contractility and intravascular volume status. It is concluded that TEE will prove to be a valuable asset in further expanding intraoperative anesthetic management of critical care patients.