Abstract # 248

Anesthetic Management of a Parturient with Severe Mitral Stenosis: A Case Report and Literature Review

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Purpose: Mitral stenosis is the most commonly encountered clinically significant valvular lesion in pregnancy.(1) Women with moderate to severe mitral stenosis do not tolerate well the cardiovascular alterations associated with pregnancy, labor and delivery. The anesthetic management of these patients is challenging and remains controversial.(1-3) We describe the anesthetic management of a parturient with severe mitral stenosis during labor and delivery under epidural analgesia, and present a review of the literature.

Clinical Features: A 25yo female presented to the pre-admission clinic at 26 weeks gestation, with increasing dyspnea (NYHA 3) and a diagnosis of severe mitral stenosis. Echocardiogram revealed a valve area of 0.9cm², mean gradient of 8.5mmHg, and a severely dilated left atrium. She was prescribed metoprolol and followed by the gestational cardiology clinic. After a multidisciplinary discussion, the plan was to proceed with induction of labor and vaginal delivery under epidural analgesia at 38 weeks gestation, with an assisted second stage.

Continuous EKG and invasive arterial pressure monitoring were established, and an epidural catheter was placed prior to induction of labor. Epidural analgesia was carefully titrated, and a sensory block between T8-10 was maintained. The patient remained hemodynamically stable during the second stage of labor and delivered a healthy baby. Postpartum, she was monitored in a step up unit and remained well. Follow up at four months postpartum found her symptomatically much improved.

Electronic MEDLINE and EMBASE literature searches were conducted using the keywords: “mitral stenosis”, “pregnancy”, and “anesthesia”. Searches were limited to the English language, and cases of mild mitral stenosis were excluded.

Discussion: Parturients with severe mitral stenosis are at high risk for peripartum morbidity, and present a challenge to the anesthesiologist. In our search of the literature several case reports were identified.(2,4-14) Although epidural analgesia for labor with an assisted second stage is generally the preferred method of delivery, the majority of reported cases involved Cesarean section. Neuraxial and general anesthetic techniques have been employed and both have resulted in favorable outcomes.

Our current case report confirms that a properly titrated epidural and careful fluid management, combined with continuous EKG and invasive arterial pressure monitoring, can result in an uncomplicated vaginal delivery even in a case of severe mitral stenosis.

1. Middle East J Anesthesiol 2010 20(4):585-8