

CASE REPORT

ABSTRACT 02

Severe Pulmonary Stenosis in A Parturient Undergoing Caesarian Section

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Introduction: Cardiovascular disease in pregnancy complicates about 1-3% of all pregnancies and is one of the leading causes of maternal morbidity and mortality. Pregnant women with severe valvular heart disease could have significant hemodynamic changes and decompensation especially during caesarean section. Given the low prevalence of the disease in pregnancy, not many recommendations on anaesthetic management of this patient could be found from the review of the literature and case reports.

Case Presentation: We report a case of a 25-year-old G2P0+1 with morbid obesity (BMI of 49) at 36 weeks of pregnancy who was referred for elective caesarean section. She was diagnosed with isolated pulmonary stenosis at the age of 9 years old but had defaulted follow up. Preoperative echocardiography in May 2024 showed severe pulmonary stenosis with mean pulmonary gradient (PG) of 80 mmHg, good right ventricular function, no pulmonary hypertension, no worsening of RVOT obstruction. Given the patient's co-morbid and cardiovascular status, a low-dose sequential combined spinal epidural (CSE) technique was chosen. The spinal anaesthesia was administered using 4.5mg hyperbaric bupivacaine 0.5% and 15mcg of fentanyl, providing rapid onset of sensory blockade. The epidural top-up was administered using a combination of 2% lignocaine and 1:20 000 adrenaline with a total of 6.5mls. Throughout the procedure, the vital signs were stable with no significant haemodynamic changes observed intraoperatively. The low-dose CSE technique provided adequate anaesthesia and analgesia during the surgery while minimizing exaggerated hemodynamic effects associated with high dose of local anaesthetics.

Conclusion: Isolated pulmonary stenosis in pregnant woman presents a unique challenge to the anaesthetists. The understanding of the physiological adaptation of the condition is important to ensure a safe anaesthesia could be instituted. Individualize anaesthetic care is crucial and needs to be tailored for every pregnant patients. The use of a low-dose sequential CSE technique in this patient was shown to be effective and safe, providing reliable anaesthesia while maintaining cardiovascular stability.

Keywords: anaesthesia: anaesthetic technique, obstetric, pulmonary stenosis

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