

Regional anaesthesia in a patient with aortic stenosis for bladder tumour resection

Sir,

We report a case of a 77-year-old male, admitted with complaints of bleeding and intermittent painful micturition. He was a known case of aortic stenosis but was asymptomatic. On examination, the patient was conscious, oriented with Glasgow Coma Scale of 15/15, heart rate 78/min, blood pressure 150/60 mmHg and SpO₂ 98%. He was edentulous with an inter-incisor gap of less than two fingers.

The patient belonged to New York Heart Association Grade II. There was an ejection systolic murmur in second right intercostal space. Examination of other systems was within normal limits. He was advised to undergo aortic valve replacement, which was refused by him and his relatives.

Patient's electrocardiography showed left axis deviation and left ventricular hypertrophy. Two-dimensional echo showed mixed aortic valve disease (degenerative type) with aortic valve area of 0.71 cm² and transaortic gradient (peak/mean) 85/52 mmHg, concentric left ventricular hypertrophy with no regional wall motion abnormality. Contrast-enhanced computed tomography showed distended urinary bladder with maintained contours, having normal capacity. A well-defined nodular lesion of 1.53 cm × 1.42 cm was seen at 5'o clock position at left posterolateral bladder wall, and rest of the bladder walls are of normal thickness.

In view of a potentially difficult airway, we decided to proceed with combined spinal-epidural anaesthesia.

In the operating room, the patient was noted to have heart rate of 70/min with sinus rhythm, blood pressure 158/68 mmHg and SpO₂ 98%. An 18 gauge intravenous cannula was secured, and the patient was preloaded with Ringer lactate solution. The patient was given injection midazolam 1 mg intravenously, and the left radial artery cannulated secured under all aseptic precautions for beat-to-beat blood pressure monitoring. An epidural catheter was introduced in the L1-L2 space and a subarachnoid block was given in the L3-L4 space with 5mg of 0.5% injection bupivacaine (with dextrose) using 25 gauge Whitacre needle in sitting position. Following this, 85.2 mg 2% injection lignocaine was given through epidural catheter. The surgical incision was allowed when loss of pinprick sensation reached T10 dermatome level bilaterally, and Bromage scale of three was achieved.

Obturator nerve block was given on the left side with 15 ml of 0.5% injection bupivacaine to prevent sudden jerk (adductor reflex) intraoperatively, which may lead to bladder perforation and incomplete resection of the bladder tumour.^[1] It is an effective and safe method to prevent adductor muscle spasm in tumours located on the lateral bladder wall.^[2] Oxygen was given through nasal cannula at a flow rate of 3 L/min.

Intraoperatively, the patient had a heart rate 68/min, blood pressure 157/62 mmHg and SpO₂ 100%. The goal was to maintain sinus rhythm,^[3] stroke volume and avoid systemic hypotension.^[4,5]

Phenylephrine, noradrenaline infusions and defibrillator pads were kept standby. There were no

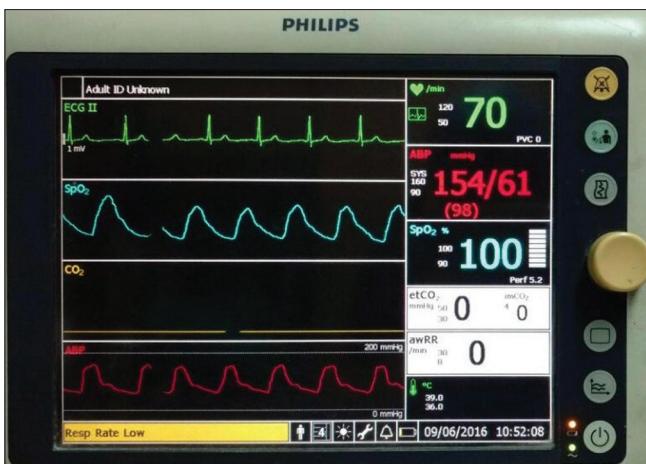


Figure 1: Post-operative vitals

episodes of hypotension intraoperatively, and there was no significant blood loss during the procedure. Difficult airway cart with a supraglottic device (I gel) and a video laryngoscope were kept as standby in view of a difficult airway [Figure 1].

After the procedure, the patient was shifted to the post-anaesthesia care unit for overnight monitoring. Postoperatively, the patient was given epidural top-ups with 0.125% injection bupivacaine, for pain relief.

Both general and regional anaesthesia have significant risks, but incremental epidural with low-dose spinal anaesthesia and obturator block along with continuous invasive haemodynamic monitoring should be considered a reasonable alternative to general anaesthesia in such patients.

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Conflicts of interest

There are no conflicts of interest.

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