

## Case Report

# Epidural anesthesia for herniotomy and hernioplasty in moderately compromised cardiac patient: case report and review of literature

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### Abstract

*Commonly herniotomy and hernioplasty is performed under subarachnoid block (SAB). In this report we describe the anesthetic management of a patient with moderately decreased cardiac function who underwent herniotomy and hernioplasty under lumbar epidural anesthesia. To the best of our knowledge this case is one of the few literature which describe epidural anesthesia for herniotomy and hernioplasty in a cardiac compromised patient.*

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### Case report

A 46 years old male patient presenting us with left sided inguinal hernia. On examination he looked ill but lying supine comfortably in bed. On auscultation first and second sounds were audible with no murmur. Blood biochemical analysis showed normal figures. Chest -X-ray showed cardiomegally with pulmonary hypertension. ECG showed bifascicular block with sinus tachycardia.

Echocardiography showed global hypokinesias with moderate left ventricular systolic dysfunction (LVEF-30%), moderate TR with mild pulmonary hypertension, mild pericardial effusion and diastolic dysfunction(G-1).

Due to his cardiac compromised condition the plan was epidural anesthesia instead of subarachnoid block (SAB). Premedication was given at previous night of oral anxiolytic lexotanil (2.5mg). After proper counseling about the risk of anesthesia and surgery an informed consent was taken from the party.

Upon arrival of the patient to operation theatre routine monitoring were established. The measured blood pressure was 110/70 mm of Hg and heart rate 100 beat/min with oxygen saturation on room air was 98%. Then a 16G i.v cannulation was established in left hand. Then the patient was

placed on sitting position and lumbar epidural catheter was placed at L3 and L4 level under complete aseptic technique. Then a test dose of adrenaline mixed 2% lignocaine (3ml) was given through the catheter and check for either intrathecal or intravascular placement of a catheter. After appropriate checking catheter was fixed on back by micro pore and patient again back to his supine position. Then local anesthetic 2% lignocaine 3 ml and 0.25% bupivacane 7 ml was injected through the catheter. Opioid analgesic fentanyl 50 µgm was also given not only increasing the quality of block but also increasing the prolongation of analgesia. After 25-30 minutes of giving local anesthetic agent incision was given by checking with tooth forceps. Foleys catheter was inserted for bladder rest. The mean range of blood pressure intraoperatively was 90-110 mm of Hg. Sedation was maintained with 25mg pethidine every 30 minutes interval. Total fluid received during peroperative period about 700 ml of crystalloids solution. Total urine output was 300 ml and surgery took about 60 minutes. Through the procedure the vital signs were stable and the patient was comfortable. At the end of the procedure he was transferred to surgical ICU with stable vital signs. Next day he was transferred to surgical floor.

## Discussion

Commonly herniotomy and hernioplasty is performed under subarachnoid block (SAB). But in our case the cardiac status of patient was moderately compromised. So we choose epidural anesthesia for this patient. As we know in epidural there is less chance of hypotension so requirements of vasoconstrictors is also negligible. There is no chance of post Dural puncture headache (PDPH) in epidural anesthesia. By this technique not only preoperative as well as postoperative analgesia was maintained<sup>1</sup>. In a study compared three anesthetic technique general, general supplemented by fentanyl and general combined with TEA it was found that, general anesthesia with sevoflurane/ $N_2O$  could not suppress stress response of both hypothalamic-pituitary-adrenocortical axis and sumpathoadrenal axis while TEA suppress only the sympathoadrenal responses<sup>2</sup>. In a case report combined spinal/epidural technique was used for a patient with significant chronic obstructive lung disease (COPD) underwent lap. Cholecystectomy with encouraging results<sup>3</sup>. In another series epidural anesthesia was used as sole technique for LC and the authors recommended it for patients who are not good candidates for general anesthesia due to cardio respiratory problems<sup>4</sup>.

In conclusion, patient with limited cardiac reserve undergoing lower abdominal surgery present

challenges to anesthesiologists. So patient with moderate to severely compromised cardiac function should be assessed adequately preoperatively not only by anesthesiologists but also by cardiologist and should be counseled about the risk properly to the patient and also to the party before giving anesthesia.

## References

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