



Letter to Editor

Ultrasound-guided erector spinae plane block with graded epidural anesthesia for open cholecystectomy in geriatric patient

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Sir,

Geriatric patients with comorbidities and poor cardiac reserve undergoing surgery pose a great challenge in perioperative period. Here, we report a case of a 78-year-old male, ASA grade II, 60 kg, posted for open cholecystectomy. Patient had a history of myocardial infarction, underwent angioplasty 2 years back and was on medication such as Tab. Metoprolol-25mg OD, Tab. Nitroglycerine 2.6mg BD, Tab. Aspirin 75mg OD, Tab. Clopidogrel 75mg OD. Of these, low dose aspirin was continued & Tab. Clopidogrel was discontinued 7 days before surgery. Coagulation profiles such as Prothrombin Time -International Normalized Ratio (PT-INR), and aPTT were within normal limits. On examination, thin-built patient, had a pulse rate of 52/min, BP- 140/80 mmHg, respiratory rate of 16/min, and temperature of 98.6° Fahrenheit. Laboratory investigations revealed Hb-11.4 g/dl, total leukocyte count (TLC)-5180 cells/cumm, platelet count-1.6 lakh, urea-16 mg/dl, creatinine-0.88 mg/dl, sodium-141 mmol/L, potassium-4.8 mmol/L, and total serum bilirubin-2.5 mg/dl. Chest X-ray findings were suggestive of cardiomegaly with lower zone consolidation on the left side. ECG showed ST depression(V1-V6) and left axis deviation. Spirometry revealed very severe reversible obstruction with an FEV1/FVC ratio of less than 50% post-bronchodilator administration. The patient

was New York Heart Association – class III (NYHA) and his breath-holding time was <20 s. On auscultation, bilateral basal crepitations were present. Echocardiogram revealed a dilated left atrium with global hypokinesia with moderate LV systolic dysfunction (LVEF-30%), mild mitral regurgitation, mild aortic regurgitation, mild tricuspid regurgitation, mild pulmonary arterial hypertension. On the day of surgery, standard ASA monitors were attached, and baseline vitals were recorded. Intravenous line was secured. The patient was turned to a lateral decubitus position. A linear USG probe was placed in longitudinal parasagittal approximately 3cm lateral to the T8 spinous process. After identification of the trapezius, rhomboid major, erector spinae muscle, and transverse processes, a 10 mm peripheral nerve block needle was inserted through the skin in the cranial direction. Erector Spinae Plain Block (ESPB)^{1,2} was given with 20 ml of the local anesthetic mixture (bupivacaine 0.5%, 7.5ml; lidocaine 2%, 2.5 ml; and NaCl 0.9%, 10ml) in the ESP on the right side after aspiration to prevent inadvertent intravascular injection. The epidural catheter³ was placed at T12. The position was confirmed and a test dose of 3 ml of 2% lignocaine with adrenaline (15µgm) was given after negative aspiration. 3–5 ml aliquots of plain bupivacaine 0.5% were given through the catheter in graded manner, a total of 10 ml of the drug was given. The block level achieved was T6 and followed Bupivacaine infusion at the rate of 5.0ml/hour.(started after 30 mins.)

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The patient had two episodes of hypotension intraoperatively with tachycardia and ST strain pattern, one at 10 min and the other at 45 min after the block, and was managed with an injection of phenylephrine 50 μg . Fluid boluses were avoided. Total fluid was administered as 400 ml of hydroxyethyl starch. Urine output was 150ml. Oxygen was supplemented via a Hudson mask at 6L/min. The total duration of surgery was 80 minutes. Postoperatively, epidural infusion of 0.125% bupivacaine with fentanyl 2 μg was continued till 48 hours, visual analogue pain score was <4 and the catheter was removed after 48 hrs. ESPB (by blocking both visceral and somatic pain) along with graded Thoracic epidural anesthesia⁴ can be a safer alternative in high-risk geriatric patients as it helps maintain hemodynamic stability, provides better analgesia, avoids the need for general anesthesia and hence decreases the incidence of post-operative morbidity and mortality, and ensures early recovery.

Conflict of Interest

None.

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