

Graded Epidural Anaesthesia for Intertrochanteric Fracture Femur with Recent Inferior Wall Myocardial Infarction: A Case Report

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ABSTRACT

Intertrochanteric fracture of femur with inferior wall Myocardial Infarction (MI) is rare. The aims of operative management for elderly patients with inferior wall MI intertrochanteric fracture are to prevent general complications, early mobilization and to relieve pain. We present a case of 80 year old man with intertrochanteric fracture of femur with recent inferior wall MI. The fracture was managed surgically with epidural anaesthesia for ORIF with PFN.

Keywords: Myocardial ischemia, ropivacaine, graded epidural

INTRODUCTION

Myocardial ischaemia usually results from increase in myocardial oxygen demand exceeding the capacity of the stenosed coronary arteries to increase oxygen supply. Collateral vessels, increased in size and number, may develop between the ischemic zone and an adjacent nonischemic area supplied by a different vessel.^[1]

Inferior wall myocardial infarctions are due to ischemia

and infarction to the inferior region of the heart.

In 80% of patients, the inferior wall of the heart is supplied by the right coronary artery via the posterior descending artery.^[2]

The most common ECG finding with inferior wall MI is ST elevation in ECG leads 2, 3, aVF with reciprocal ST depression in lead aVL. The right coronary artery perfuses the AV node, so there are associated bradycardias, heart

blocks and arrhythmias with inferior wall MI.^[3]

CASE REPORT

A 80 year old male patient with history of fall at home was diagnosed with closed comminuted intertrochanteric fracture of left femur was posted for ORIF with PFN. Patient is known hypertensive since 5 years, on Tab. Amlodipine 5 mg OD, had history of inferior wall MI 10 days back, PTCA with DES to RCA. Patient had no other comorbid conditions.

On preanaesthetic checkup, patient was conscious, coherent, cooperative weighing 50 kgs, ht 170 cms and vitals stable. Routine blood investigations are within normal limits. Chest X-ray showing mild emphysematous changes, ECG showed ST segment depression in V1-V3 leads with presence of q waves in lead 2 and aVF, showing left axis deviation.

On echocardiography, inferior wall mption abnormality, mild LV dysfunction noted. Coagulation profile was normal. Patient was on Tab. Aspirin 150 mg, Tab. Clopidogrel 75 mg, Tab. Statins 20 mg. Patient was made to stop Tab. Clopidogrel 75 mg 5 days prior to surgery and continued Tab. Aspirin 150 mg on the day of surgery. Graded epidural anaesthesia was planned.

Patient was nil per oral for 8 hours, was given 0.5 mg of alprazolam orally the previous night. In the anaesthesia room, IV access was secured with 18G cannula in his right hand. Baseline monitoring done with pulse rate, blood pressure, oxygen saturation, ECG. Patient was placed in sitting position, 18G Touhey needle was inserted via median approach in L4-L5 interspace. Epidural space was identified with air-saline technique.

A multiorifice epidural catheter was inserted via touhey needle and fixed at 10 cm. 6cc of 0.75% Ropivacaine was given through the catheter. Block was checked and sensory level achieved upto T8. Procedure lasted for 90minutes. Intravascular volumes were maintained by giving 1 pint NS and 1 pint RL. Intraoperatively, patient remained haemodynamically stable throughout the procedure, except for one episode of hypotension, managed with 200 ml of IV fluid bolus and 100 mcg of phenylephrine.

Postoperatively, patient was monitored in the recovery room and epidural analgesia activated with 0.2% Ropivacaine 6cc.^[4] Sensory level attained till T8 and lasted for 12 hours. Epidural analgesia given three times and epidural catheter removal done after 48 hours. Patient was haemodynamically stable 48 hours after procedure.

DISCUSSION

Epidural anaesthesia requires a cooperative patient and

should have the physiological reserve to lie still for the duration of surgery. Epidural analgesia reduces the incidence of postoperative atelectasis and pulmonary complications relative to general anaesthesia.

In geriatric patients, lumbar graded epidural anaesthesia appears to provide greater benefit than other techniques as it attenuates the perioperative stress response, improves myocardial oxygenation, reduces the release of Troponin T and effectively controls refractory MI, as a result of sympatholysis.

Lower incidence of postoperative thromboembolism due to peripheral vasodilatation and maintenance of venous blood flow in the lower extremities. The sensory block achieved till T8, mental status is also improved immediately after surgery in elderly.

On the basis of various clinical studies and observations, it must be concluded that Epidural Anaesthesia has distinct advantage over General Anaesthesia in presence of ischemic changes in elderly patients. Haemodynamic stability and pain relief were established during and after the surgery. Epidural anaesthesia should be considered as a reliable anaesthesia technique compared to general anaesthesia for appropriate surgical procedures in the elderly.

CONCLUSION

Graded epidural anaesthesia is a safe, reliable technique in maintaining haemodynamics stable in high risk patients over general anaesthesia.

CONFLICT OF INTEREST:

The authors declared no conflict of interest.

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