

Anaesthetic Management in a Patient with Reduced Ejection Fraction for Below Knee Amputation - A Case Report

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1. Case Report

A 65 year old female patient, known case of hypertension for 8 years, type 2 diabetes mellitus for 5 years, admitted to SVRRGGH hospital with ulcer on right foot for 20 days, posted for right below knee amputation.

She was on T. Amlodipine 5mg od, later changed to T. Metoprolol 25 mg od, and on irregular medication, taking T. Metformin 500mg bd.

Patient had NYHA 2 breathlessness.

There was prior history of chest pain an year ago, admitted to hospital, and was started on T. Aspirin 75 mg od, T. Atorvastatin 10mg odsince then.

There was no history of orthopnea, paroxysmal nocturnal dyspnea, prior transient ischmeic and syncopal attacks.

On examination:

Patient is conscious, coherent

Pr: 96/minute, regular, normal volume,

Bp: 170/90 mmhg,

CVS: S1 S2 heard

Ejection systolic murmur heard in right second intercostal space.

Rs: bilateral air entry present, no added sounds

CNS: no focal neurological deficit

Patient is unable to climb 2 flight of stairs without breathlessness.

Airway examination:

Mouth opening is 2 fingers, edentulous

Temporomandibular joint mobility is restricted

Mallampati grade 3

Thyromental and hyomental distance are normal

Neck movements are restricted

Blood investigations are within normal limits.

Random blood sugar is 170mg/dl.

Ecgshown normal rate, sinus rhythm, LVH noted.

Echocardiography revealed:

Aortic stenosis

Ejection fraction: 44%

Hypertrophied left ventricle

No pulmonary arterial hypertension.

No regional wall motion abnormalities.

Chest x ray: no abnormality detected.

Patient comes under **ASA class 3**.

Patient was posted for emergency below knee amputation, In view of reduced ejection fraction, it was planned under only epidural anesthesia.

After obtaining risk consent, patient was shifted to operation theatre, following monitoring done:

Pulse oximetry,

Non invasive blood pressure,

Electrocardiogram.

2. Procedure

Under strict aseptic precautions, draping done, after skin infiltration with 2ml of 1% plain lignocaine, 18 g Tuohyneedle is injected at L3 - L4 space, epidural space is confirmed by loss of resistance and hanging drop methods, epidural catheter is passed and fixed at 9cm mark and secured after giving test dose 2ml of 2% lignocaine with adrenaline.

- Patient is given 8ml of 0.5% bupivacaine, level achieved upto T10.
- Procedure started, lasted for 1 hour 10 minutes.
- No intraoperative adverse events.
- Patient was shifted to post operative ward, later to ward.
- Post operative period uneventful.

3. Discussion

- Patients with ischemic heart disease are prone to arrhythmias, myocardial ischemia, infarction in the peri operative period.
- Careful monitoring is required to detect early rhythm disturbances and ischemia.
- Factors which change myocardial oxygen supply and demand should be taken care of.
- Beta blockers and statins should be continued through out the peri operative period.
- Regional anesthesia can be a good choice in low and intermediate risk cases undergoing non cardiac surgery such as of lower abdomen, extremities etc.

4. Conclusion

Epidural anesthesia is safer technique compared to spinal anesthesia in patients with ischemic heart disease, reduced

ejection fraction who are undergoing non cardiac procedures.

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