VOLUME - 14, ISSUE - 04, APRIL - 2025 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Anesthesiology

ANAESTHETIC MANAGEMENT OF A PATIENT WITH CCF POSTED FOR ELECTIVE ANKLE ARTHRODESIS

Dr Medha Krishna VP Department Of Anaesthesia, KVG Medical College, Sullia

Dr Anish Sharma NG Department Of Anaesthesia, KVG Medical College, Sullia

Dr S Sanjay Department Of Anaesthesia, KVG Medical College, Sullia

ABSTRACT

Introduction: Patients with low ejection fraction and congestive cardiac failure (CCF) are at an increased risk of significant perioperative cardiac complications and mortality. The primary objective in managing such patients during surgery is to ensure hemodynamic stability. **Case Report:** A 65 year old male patient came with the history of trauma over the left foot followed by a non healing ulcer associated with intermittent pain and non purulent serosanguinous discharge from the ulcer. He was a known case of type 2 diabetes mellitus since 9 years on Glimepiride 2mg BD and a known case of CAD/Congestive cardiac failure on Aspirin, statin, diuretics and beta blockers. On examination , vitals were stable , bilateral grade 1 pitting pedal edema was noted. Also bilateral basal crepitations were present.The patient was posted for elective ankle arthrodesis under selective spinal anesthesia. Patient was taken up for surgery under ASA3,NYHA class 3 CHF , METS <4 after , obtaining high risk consent. Under all aseptic precautions ,subarachnoid block was given with patient in left lateral position , in L3-L4 interspace using 27G Quincke spinal needle , with a mixture of Ropivacaine 0.75%(H) 1ML and Morphine 100mcg(1ml).Patient remained in the lateral position for 15minutes following which was positioned supine for surgery. Intraop and postop were uneventful.Patient was pain free for 6hrs postop **CONCLUSION :** Selective spinal anaesthesia can be a useful alternative anesthetic technique in patients with low output heart failure undergoing lower limb surgeries.

KEYWORDS : CCF, Unilateral Spinal Anaesthesia, Non Cardiac Surgery

INTRODUCTION

Patients with low ejection fraction CCF have a high risk of perioperative major adverse cardiac events and death. Major perioperative goal of management in a patient with low EF is maintaining haemodynamic stability. Anaesthetic goals include maintaining forward flow , inotropy, good analgesia, anaesthesia and amnesia.

Case Report

A 65 year old male came with history of trauma over the left foot followed by a non healing ulcer associated with intermittent pain and non purulent sero-sanguinous discharge from the ulcer. He was a known case of type 2 diabetes mellitus since 9 years on Glimepiride 2mg BD and a known case of coronary artery disease/congestive cardiac failure on Tab Aspirin 75mg 0-1-0 , Tab Atorvastatin 10mg 0-0-1 , Tab Torsemide 10mg 1-0-1 and Tab Metoprolol 25mg BD. On examination , vitals were stable , bilateral garde 1 pitting pedal edema was noted and bilateral basal crepitations were present. The patient was posted for elective ankle arthrodesis under selective spinal anesthesia. Patient was taken up for surgery under ASA3, NYHA class 3 CHF , METS < 4 after obtaining high risk consent.On investigations, 2D ECHO showed Global hypokinesia , Severe LVSD , EF 32% , Grade2 Diastolic Dysfunction , Dilated LA/RA/RV , sclerosed aortic valve. Preoperatively optimization was done by advising NPO , antiaspiration prophylaxis, beta blocker and diuretics were continued , aspirin was withheld on the day of surgery. Inside the OT , ASA Standard monitors were connected together with blood pressure. Supplemental oxygen was administered via simple face mask at 6L/Minute. Under all aseptic precautions, subarachnoid block was given with the patient in left lateral position, in L3-L4 interspace using 27G Quincke spinal needle , with a mixture of Ropivacaine 0.75%(H) 1ML and Morphine 100mcg(1ml).Patient remained in the lateral position for 15minutes following which was positioned supine for surgery. Intraop and postop were uneventful.Patient was pain free for 6hrs postop.

Informed & Written Consent Was Obtained From The Patient To Participate As Well As Publish The Data.

Anaesthetic Management

Preoperatively, optimization was done by advising NPO, anti aspiration prophylaxis, beta blocker and diuretics were continued, aspirin was withheld. ASA Standard monitors were connected together with invasive blood pressure, pulse oximetry and 5 lead ECG. Supplemental oxygen was administered via simple face mask at 6L/Minute. A urinary catheter was placed to measure urine output. Patient was positioned in left lateral position, under all aseptic precautions L3-L4 interspace was palpated . Skin was anaesthetized with 2.5ml of 2% Lidocaine.Using 27G Quincke spinal needle mixture of Ropivacaine 0.75%(H) 1ML and Morphine 100mcg(1ml) was administered into subarachnoid space. Patient remained in the lateral position for 15minutes.Then he was turned supine and properly positioned for surgery.Adequate level of blockade achieved till T8. Surgery was completed in 90 minutes .Intraop and postop was uneventful. No vasopressors were required.

Around 200ml IV fluid was transfused intraop .Blood loss was estimated to be around 250ml.Urine output was 100ml.Patient was pain free for 6hrs postop.

DISCUSSION

Heart failure is a high risk disease with considerable perioperative morbidity and mortality demonstrating the need for careful assessment, optimization and anaesthesia planning for patients undergoing cardiac or noncardiac surgery . In any surgical procedure involving low EF maintaining hemodynamic stability and intraop survival becomes a challenging issue. Selective spinal anaesthesia can be achieved using a reduced dose of LA with adjuvants and maneuvers to control the spread of the block so that only the nerve root supplying specific area are affected.

Low dose of LA with opioids plus manuevers for unilateral spinal anaesthesia reduces the hemodynamic disturbances and it provides prolonged postop analgesia

Conflicts of Interest: The authors declare that they have no conflicts of interest.

Acknowledgements:

The authors declare that they have no competing interest

CONCLUSION

Selective/unilateral spinal anaesthesia can be a useful alternative anesthetic technique in patients with low output heart failure undergoing lower limb surgeries.

REFERENCES

1. Borgeat A, Aguirre J. Update on local anesthetics. Curr Opin Anaesthesiol. 2010;23:466–471. [PubMed] [Google Scholar]
2. Simpson D, Curran MP, Oldfield V, Keating GM. Ropivacaine: A review of its use in regional anaesthesia and acute pain management. Drugs. 2005;65:2675–717. [PubMed] [Google Scholar]
3. Tayal U, Prasad S, Cook SA. Genetics and genomics of dilated cardiomyopathy and systolic heart failure. Genome Med. 2017;9(1):20. doi:10.1186/s13073-017-0410-8 - DOI - PMC - PubMed