

CASE REPORT

A Case of Mitral Valve Replacement with atrial Fibrillation Posted for Hernioraphy: Anaesthetic Management

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ABSTRACT

Introduction: Anesthesia management for a patient with **mitral valve replacement (MVR)** and **atrial fibrillation (AF)** undergoing **hernia repair (hernoplasty)** requires careful consideration of the cardiovascular status, anticoagulation therapy (ASRA guidelines to be followed), and potential interactions with anesthetic agents.

Case Report: Our patient aged 51 yrs Male came to the hospital with complaints of swelling over right groin since 6 months associated with pain and was diagnosed with Inguinal Hernia. Patient has a history of Mitral Valve Replacement done 10 yrs ago and ECG showed irregular irregular rhythm with no p waves and heart rate of 60-100 bpm.

ECG showed Atrial fibrillation. 2d Echo showed s/p mitral valve replacement with normal functioning prosthetic valve, MVG=10/5 mmhg, Dilated Left atrium mild MR, mild TR (PASP=45mmhg), mild AR, Adequate systolic function and LVEF=55%, other investigations under normal limit.

Patient was on T. Warfarin 3 mg, T. Atorvastatin 10 mg, T. Bisoprolol 5 mg Once Daily. T. Warfarin was replaced by Inj. Enoxaparin 0.4 Sub cutaneously twice a day till INR is less than 1.5 and that was stopped 12 hours prior to the surgery.

Patient was given Sub Arachnoid Block with 25 G quinckes Spinal needle, Inj Bupivacaine (0.5%) (heavy) 16 mg was given. Inj. Pethidine 20 mg and Inj. Midazolam 1 mg were given for Sedation.

Conclusion: The patient was successfully managed with Mitral valve replacement and atrial fibrillation with Anti Coagulants and without Cardioversion.

KEYWORDS

• Mitral Valve Replacement • Atrial Fibrillation • Hernioraphy

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INTRODUCTION

Anesthesia management for a patient with mitral valve replacement (MVR) and atrial fibrillation (AF) undergoing hernia repair (hernioplasty) requires careful consideration of the cardiovascular status, anticoagulation therapy (ASRA guidelines to be followed), and potential interactions with anesthetic agents.

CASE REPORT

Our patient aged 51 yrs Male came to the hospital with complaints of swelling over right groin since 6 months associated with pain and was diagnosed with Inguinal Hernia. Patient has a history of Mitral Valve Replacement done 10 yrs ago and ECG showed irregular irregular rhythm with no p waves and heart rate of 60-100 bpm. ECG showed Atrial fibrillation. 2d Echo showed s/p mitral valve replacement with normal functioning prosthetic valve, MVG=10/5 mmhg, Dilated Left atrium mild MR, mild TR (PASP=45 mmhg), mild AR, Adequate systolic function and LVEF=55%, other investigations under normal limit. Patient was on T. Warfarin 3 mg, T. Atorvastatin 10 mg, T. Bisoprolol 5 mg Once Daily. T. Warfarin was replaced by Inj. Enoxaparin 0.4 Sub cutaneously twice a day till INR is less than 1.5 and that was stopped 12 hours prior to the surgery Patient was given Sub Arachnoid Block with 25 G quinckes Spinal needle, Inj Bupivacaine (0.5%)(heavy) 16 mg was given. Inj. Pethidine 20 mg and Inj. Midazolam 1 mg were given for Sedation. Intraoperatively the patient was managed with 3 pints of fluids, Inj. Pethidine 20mg and Midazolam 1 mg was given for Sedation. The vitals of the patient were stable with heart rate of 75-80 beats per minute, BP of 130/80 mmHg and saturation of 99% with 5 liter of Oxygen supplementation was maintained.

DISCUSSION

The management of atrial fibrillation during surgery requires vigilant monitoring and readiness to address hemodynamic instability. In A Case of trans urethral resection of prostate intra operative Atrial fibrillation was managed by Intravenous Amiodarone, demonstrating the importance of prompt pharmacologic intervention.¹ Direct current cardioversion remains the choice in unstable patients, but pharmacological strategies are essential when hemodynamic stability is maintained. In patients with PHVs,

perioperative anticoagulation management is crucial. Case reports demonstrate the use of bridging anticoagulation with unfractionated heparin or low molecular weight heparin, with therapy being paused before surgery and restarted soon after to minimize both thromboembolic and bleeding risks.^{3,4} This approach aligns with major society guidelines recommending individualized management based on valve type, location, and patient risk factors.² Infective endocarditis prophylaxis, as illustrated in the cases, also plays an essential role in perioperative care. These reports reaffirm that a tailored anesthetic plan including continuation or timely adjustment of chronic medications (such as beta-blockers and digoxin), optimization of anticoagulation, and vigilant hemodynamic monitoring is vital for achieving favorable surgical outcomes. The perioperative care of patients with AF and PHVs should focus on preventing arrhythmias, optimizing anticoagulation, and ensuring cardiovascular stability. A multidisciplinary approach involving anesthesiologists, cardiologists, and surgeons contribute to reducing morbidity and mortality in this high-risk group of patients.

CONCLUSION

The patient was successfully managed with Mitral valve replacement and atrial fibrillation with Anti Coagulants and without Cardioversion.

Conflict of Interest: Nil

REFERENCES

1. Paul A, Kate P, Maiti S, Nasreen F. Anaesthetic management of a case of atrial fibrillation posted for transurethral laser resection of prostate. *Indian J Appl Res.* 2017;7(1):735-7.
2. Nath SS, Parashar S. Perioperative management of patients with prosthetic heart valves: A narrative review. *Ann Card Anaesth.* 2022;25(3):254-63.
3. Umesh G, Verma S, Jasvinder K. Anesthetic management of a patient with prosthetic heart valve for non-cardiac surgery: A case report. *Cases J.* 2008;1:196.
4. Sravanthi GN, Madhusudhana R. Perioperative management of a patient with prosthetic mitral valve posted for ankle surgery. *Indian J Anesth Analg.* 2021;8(1):129-31.