Letter to Editor

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Major Anaesthetic Challenges during Minor Surgery: A Case of Ventricular Thrombus

Anaesthesia Section

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Dear Editor,

Ventricular thrombi can develop more frequently in individuals with certain underlying conditions, the most common being post-myocardial infarction and dilated cardiomyopathy [1]. Their occurrence without underlying cardiac disease is unusual, and these thrombi are often identified incidentally [2]. We present the anaesthetic approach for a 48-year-old male undergoing emergency incision and drainage of a 5×5 cm carbuncle on the back of the neck, who was incidentally diagnosed with a large Left Ventricular (LV) thrombus.

The patient had a 10-year history of poorly controlled diabetes {Glycosylated Haemoglobin (HbA1c) 13.8%, blood glucose 234 mg/dL}. There were no other significant findings in his history or examination. Investigations revealed an Electrocardiogram (ECG) showing global T wave inversions and transthoracic echocardiography demonstrating a reduced ejection fraction (40%) with an apical thrombus in the LV measuring 37×29 mm. Counselling regarding the preoperative high risk of thromboembolic phenomena and stroke was provided. Emergency drugs, including amiodarone, were prepared in advance along with a defibrillator. Although Cardiopulmonary Bypass (CPB) was not directly accessible, we discussed escalation strategies with the cardiac surgery team and prepared for emergency intervention.

General anaesthesia was induced using graded doses of fentanyl (2 mcg/kg), etomidate (0.3 mg/kg), and vecuronium (0.1 mg/kg). Lignocaine (1.5 mg/kg) was administered to suppress the laryngoscopy-induced sympathetic response. An 8-sized endotracheal tube was used for intubation. Maintenance of anaesthesia was achieved with sevoflurane along with air and oxygen. The surgical procedure was conducted in a semi-prone (lateral) position instead of the prone position to reduce cardiac load, lower the risk of embolisation, support haemodynamic stability, and ensure access for resuscitative measures if needed. The surgeon was advised to perform local infiltration with 10 mL of 1% lignocaine without adrenaline. Intraoperatively, the haemodynamic parameters remained stable. A brief episode of atrial flutter occurred just before extubation; however, it resolved without any intervention. Reversal of neuromuscular blockade was achieved with sugammadex (2 mg/kg), and the patient was extubated uneventfully. Postoperatively, the patient was monitored in recovery for one hour before being transferred to the ward. He was advised to follow up with cardiology for anticoagulant therapy.

Patients with LV thrombi are at heightened risk for embolic complications, particularly during anaesthetic-related haemodynamic shifts [2]. Key anaesthetic goals include maintaining sinus rhythm and preventing tachycardia, excessive contractility, and hypotension [3]. We prioritised agents and techniques that provided cardiovascular stability, such as etomidate for induction, lignocaine to mitigate sympathetic responses, and the exclusion of stimulatory agents like adrenaline and ketamine. If an embolus is large enough to obstruct the LV outflow tract, on-table cardiac arrest may occur. Performing cardiopulmonary resuscitation or defibrillation in such a situation can increase the risk of further embolisation [4]. Therefore, pharmacologic management was planned to take precedence over mechanical resuscitation. Literature supports the use of CPB as a contingency in such cases when available [5].

Such cases presenting for noncardiac surgery in emergency settings are uncommon and pose significant management challenges due to the complexities involved in decision-making for an anaesthesiologist. Anaesthetic management in these scenarios necessitates a careful balance of strategies to minimise the risk of systemic embolisation while ensuring optimal blood pressure for adequate organ perfusion.

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