



Anaesthetic Management of Patient with Acute Pericarditis Undergoing Amputation -A Case Report

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Abstract

Acute pericarditis is an inflammatory pericardial syndrome with or without pericardial effusion. 1 It is the most common form of pericardial disease encountered in young and middle aged people. The vast majority of cases (90%) are idiopathic in origin. 2 It presents unique perioperative consideration for anaesthesiologist. The anaesthetic plan requires careful assessment and investigations, anaesthesia and the immediate postoperative period . we represent a case report of a patient with acute pericarditis who underwent amputation under regional anaesthesia.

Keywords: Regional Anaesthesia , Acute Pericarditis.

Introduction

Acute pericarditis may be an isolated disease or the first manifestation of an underlying systemic disease. The most common cause of pericarditis in developed countries is viruses and Tuberculosis is the most common cause in developing countries. 3 Patient with acute pericarditis typically presents with chest pain that usually radiates to the trapezius ridge, left shoulder or arm and resembles ischaemic pain. Perioperative cardiac complications can occur in patients with documented or asymptomatic heart disease, ventricular

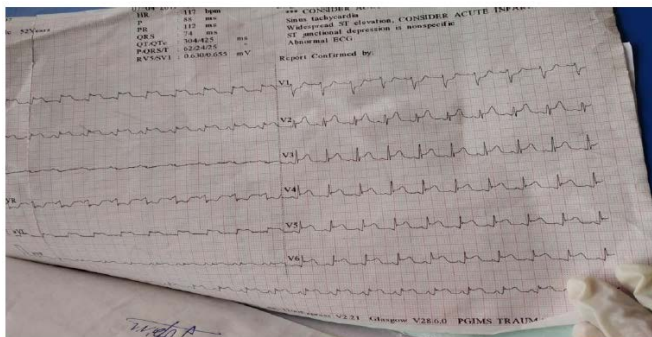
dysfunction and valvular heart disease . It has been estimated that in non cardiac surgery ,major perioperative cardiac events may occur in up to 4% of cardiac patients and 1.4% of an unselected patient population. 4 The potential and well known advantage of regional anaesthesia over general anaesthesia should be an asset in cardiac patients if the surgery can be performed under regional block.

Case report

A 52 yr old female weighing 65 kg with gangrene in right forearm posted for above elbow amputation. She was a known case of peripheral artery disease for one year. There was no history of chest pain and dyspnea at that time. No history of diabetes mellitus, hypertension , ischemic heart disease and syncopal attacks .she had a treatment history of tab Cilostazol 50 mg BD, tab Atorvastatin 20 mg BD ,tab Ecosprin 75 mg OD and tab Ramipril 2.5 mg OD .Her cardiopulmonary assessment revealed the MET(metabolic equivalents) score of 4. All routine laboratory investigations were done. Haemoglobin was 8.5 mg/dl (clinical evidence suggest that patients over age 40 should not as an elective procedure under general anaesthesia be

subjected to levels less than 10 g/dl) and urine complete had ketone bodies.

Troponin T was positive and ECG findings were tachycardia (HR= 115/ min), PR depression in all leads except avR and v 1, ST elevation in all leads except avR and v 1. Echocardiographic findings had left ventricular ejection fraction 20% cardiology opinion for ECG changes and risk stratification was done.



Regional anaesthesia (supraclavicular nerve block) was planned. Patient was taken up for surgery under high cardiac risk during perioperative period .Anaesthetic procedure was explained to the patient and informed written high risk was taken . On arrival in operation theatre all routine monitors were attached (ECG, pulse oximeter, non invasive blood pressure monitoring) and baseline readings were taken. Intravenous line was secured on left hand with 20 G canula and IV fluid was started .Preoperative vitals were heart rate (HR) - 120 per minute, NIBP 116/70 mm Hg , O 2 saturation on air 99 % . Under all aseptic precautions supraclavicular area was cleaned and draped .With Patient lying supine, shoulder down, the lateral border of the sternocleidomastoid muscle is identified and followed distally to the point where it meets clavicle. Blind supraclavicular approach was performed and paraesthesia was elicited , 20 millitres(ml) of 2% lignocaine without adrenaline to prevent tachycardia , 6 ml of 0.5 % plain bupivacaine , desired level of anaesthesia was achieved .

The block was tested to cold and pinprick prior to the surgery. Adequate level of anaesthesia achieved. Supplemental oxygen at low flow rate was administered throughout the surgery through facemask. Intraoperatively vital monitoring done. There were minimal hemodynamic changes during intraoperative period. At the conclusion of procedure, patient was taken to post anaesthetic care unit, vital monitoring being done and evaluated using modified aldrete score and shifted to ward and discharged on post operative day 4.

Discussion

A key component in the preoperative assessment is the evaluation of the presence of active or unstable cardiac conditions , surgical risk factors , functional capacity of the patient (MET score) and the presence of cardiac risk factors. First, there is ethical requirement to inform patients accurately about the benefits and the risks of surgery. Urgent procedures are those where there is limited time for clinical evaluation prior to life saving or limb saving procedure. Prior to proceeding for non-cardiac surgery, urgency for the surgery itself and risk of bleeding along with risk of ischemic events should be taken into account. 5

Surgery and anaesthesia are associated with activation of sympathetic nervous system in flammation, hypercoagulability, hemodynamic compromise, bleeding and hypothermia which can trigger cardiac complications. 6

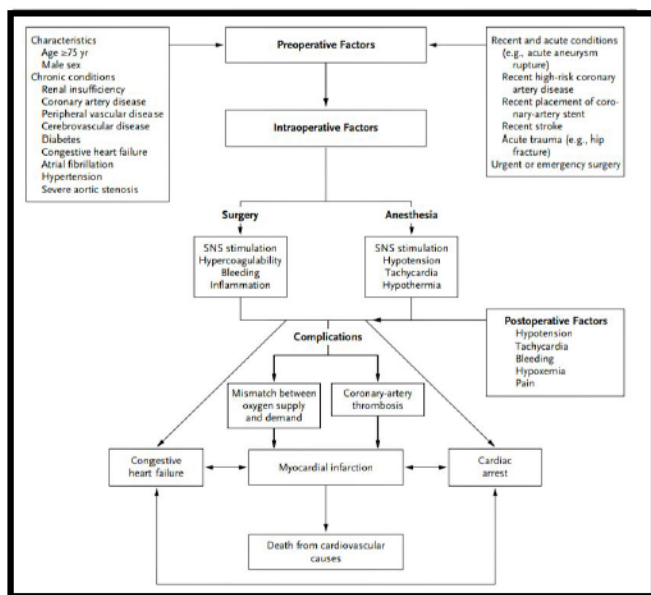


Fig. 1: Preoperative, Intraoperative And Postoperative Factors Associated With Perioperative Cardiac Complications In Patients Undergoing Major Non cardiac Surgery.⁷

Due to the limited cardiac reserve in our patient regional anaesthesia (supraclavicular nerve block) was considered safe. It is ideal for high risk surgical patients who cannot tolerate the adverse consequences of even the slightest attenuation of hemodynamic response. It is commonly used to provide intraoperative surgical anaesthesia as well as postoperative analgesia. Stable hemodynamics, avoidance of nausea, prolonged post operative pain relief, avoidance of sympathetic stimulation because of intubation and extubation, cost effectiveness, less of monitoring, early enteral feeding are benefits of regional anaesthesia.⁸

Peripheral nerve blocks give greater hemodynamic stability than any other anesthetic techniques. Adequate knowledge of the anatomy of brachial plexus is essential to form brachial plexus block. It may compromise respiratory function due to phrenic nerve blockade and hemidiaphragmatic paralysis (HDP).⁹

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