



Case Study

ANESTHETIC MANAGEMENT OF HERNIA REPAIR IN A PATIENT WITH CORONARY HEART DISEASE HAVING DONE BOTH CORONARY ARTERY BYPASS GRAFT AND STENTING EARLIER– A CASE REPORT

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ABSTRACT

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A 70 year old male weighing 70 kg who is a case of Coronary artery disease (CAD) with post Coronary artery bypass grafting(CABG) and with a drug eluting stent (DES) later came for open inguinal meshplasty. Patient was a known case of diabetes and hypertension and on treatment for the same. His blood sugar levels and blood pressure were under control. He was on dual antiplatelets. Tab. Clopidogrel was advised to stop 7 days before surgery and tab, aspirin was continued. After routine monitoring, spinal anaesthesia was administered with 1.5ml of 0.5% hyperbaric bupivacaine with 50 mcg of fentanyl and level achieved was T10. After the surgery, which lasted forty five minutes, transverse abdominis plane block was given on the left side with a mixture of 8 ml of 0.5% bupivacaine, 2 ml dexamethasone, 10 ml saline for a total volume of 20 ml. Patient was asked to continue all the drugs and resume to orals 4 hours after surgery. Perioperative period was uneventful and the patient was comfortable throughout. We conclude that a planned perioperative analgesia anchored by regional anaesthesia in this patient of geriatric age group with CAD, DES insitu improved patient outcome and early mobilization due to reduced post operative pain. This is possibly the first case report of such a case.

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INTRODUCTION

The incidence of patients with coronary artery disease coming for non-cardiac surgeries is high. Planning a safe anaesthetic modality has become challenging. Maintaining hemodynamics, preventing hypoxemia and shivering form the core of managing such cases [1]. Here we discuss a successful management of post CABG and a post stenting patient coming for elective inguinal meshplasty with a mixture of intra thecal local anesthetic and fentanyl

CASE CAPSULE

A seventy-year-old male weighing 70kg came to the preanaesthetic clinic with the complaints of a reducible left sided groin swelling since 3 to 4 months with cough impulse. There was no history of pain, chronic cough/obstipation/stomach pain/distension. He had undergone CABG in 2004 and RCA stenting done in 2014. The Patient took nitroglycerin, theophylline. Frusemide and aldactone for 2 months and stopped. Patient is a known case of diabetic and hypertension for past 25 years and is currently on tab. Gliclazide , bisoprolol, valsartan rosuvastatin, clopidogrel and aspirin. His diabetic status was under control with a random sugar of 158 mg%. He had undergone CABG in 2004 and RCA stenting done in 2014. There was no evidence to suggest any other end organ damage .He was not a smoker/ alcoholic. On clinical examination, patient was conscious, oriented, afebrile with a pulse rate of 68/ minute with a blood pressure of 130/80 mmHg. There was no evidence of heart failure. . Exercise tolerance was just more than 4 METS, with a breath holding time 22 sec. On clinical examination,

cardiac, respiratory and nervous system were normal. The investigations revealed a Hb 12.8g%, a normal TC/DC/platelets and renal function test. His blood sugar was 158 mg%. His X Ray chest was normal, ECG was showing normal rhythm with an old anterior infarction. In Echocardiography, the ejection fraction was 40%, with an akinetic IVS, mild Mitral Regurgitation.

Patient was advised to stop clopilet 7 days, valsartan 1-day prior surgery and to continue bisoprolol, statin, nitrocontin and aspirin on the day of surgery. He was also advised to stop gliclazide on the day of surgery.

On the day of surgery of surgery with an RBS 120mg/dl, HR 84bpm, BP 124/84 mm hg, he was premedicated with iv midazolam 1mg. iv fentanyl 25mcg. A Subarachnoid block was given with 1.5ml of 0.5% hyperbaric bupivacaine with 50 mcg of fentanyl and level achieved was T10. IV fluids in the form of 500ml Ringer's Lactate was administered and patient was stable intraoperatively which lasted for around 45 minutes. After the surgery, TAP block was given on the left side with a drug mixture of 8 ml of 0.5% bupivacaine, 2 ml dexamethasone, 10 ml saline to make up a total volume of 20 ml. IM Ketorolac and tramadol were administered to counter breakthrough pain. Patient was asked to continue all the drugs and resume to oral diet 4 hours after surgery. The perioperative glycemic control was adequate. Post operatively VAS score was less than 4 for two days. Oxygen was administered for 36 hours and a postoperative ECG showed

no fresh changes. The entire course was totally uneventful.

DISCUSSION

Planning a safe anesthetic technique for a patient with pre existing cardiac issues has become a great challenge. Hence, a detailed history should be taken regarding their cardiac and non cardiac comorbidities, antiplatelet and any others drugs like calcium channel blocker, beta blockers and investigated further. After all this, the patient needs to be risk stratified. This can be divided into clinical and surgical related risk factors^[2]. Major clinical predictors are unstable coronary syndrome, decompensated heart failure, significant dysrhythmia and severe valvular disease which were absent in our case. With regard to the surgical risk factor, ours was a low risk procedure. Our patient being a controlled diabetic on drugs, we did not switch over to insulin. No such insulin shots were necessary in our case. Maintenance of glycemic profile takes precedence than an unnecessary switch to insulin just because of CABG is important which we achieved in our case. As per the ASRA protocols, we decided to stop clopidogrel for seven days and valsartan for one day as we planned a regional technique. This patient had DES procedure 3 years back which places him at low risk of stent thrombosis.. Patient was asked to continue tab. Aspirin and discontinue tab Clopidogrel 7 days prior surgery for safe administration of regional anaesthesia^{[3],[4]}.. Safe CNB does not mandate complete recovery of platelet function. Studies have established that CNB is not associated with increased risk of spinal hematoma in these patients^{[5],[6]}. Combining fentanyl decreases the

dose of local anesthetic to cause minimal hemodynamic disturbances^[7].

Postoperative pain is antagonistic to a good myocardial oxygen balance. To avoid multiple intravenous and oral analgesics in the post of period, we gave transverse abdominis plane(TAP) block under ultrasound guidance before shifting the patient to the recovery^[8]. It was given when the action of spinal anesthesia was there and hence, patient did not feel any pain during the procedure. The advantages of giving the TAP block immediately after surgery is that it will take over the pain before the spinal anesthesia vanes off, prevents break through pain and reduce the requirement of other post-operative analgesics. Patient was comfortable with VAS score of less than 4 and discharged on the third postoperative day. Patient was administered oxygen by mask to counter any possibility of postoperative hypoxemia. He was maintained in a warm environment to avoid shivering which is detrimental in a patient with CAD. Such patients who had undergone both cardiac surgeries coming for non-cardiac surgery is rare in the literature and hence presented for its rarity.

CONCLUSION

To conclude, we present a case for mesh inguinal hernia repair with both CABG and stenting done but three years before, now on dual antiplatelet therapy. We stopped clopidogrel, administered subarachnoid block with a combination of Bupivacaine and fentanyl. Postoperative analgesia was taken care by TAP block. We carefully avoided triggers of myocardial oxygen imbalance by

administering oxygen and prevention of shivering. Such a case is presented for its rarity.

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