Volume : 5 | Issue : 12 | December-2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

Original Research Paper

Anaesthetic management of patient with ischemic heart disease (with EF<35%) for inguinal hernia repair

Anaesthesiology

KEYWORDS: : IHD (low EF<35%), LV dysfunction, modified hernia block, regional anesthesia

Dr. Manisha Kanagarajan	Associate Professor ACS Medical College and Hospital Department of Anaesthesiology
Dr. Vanishree C	Assistant ProfessorACS Medical College and Hospital Department of Anaesthesiology
Dr. Rama Selvam	Associate Professor ACS Medical College and Hospital Department of Anaesthesiology

ABSTRACT

Anaesthetic Management of an elderly patient with ischemic heart disease with low EF(<35%) coming for non cardiac surgery is always challenging. To the best of our knowledge very few case reports have been reported on regional anesthesia for IHD patient for non cardiac surgeries. Hence, we report the successful management of a patient with IHD for left inguinal hernia repair under regional anesthesia (modified hernia block).

Introduction

IHD is a leading cause of morbidity and mortality in the world. IHD is the most common cause of perioperative complications. Successful perioperative management of IHD patient undergoing non cardiac surgery required careful team work and communication between patient, primary care physician aneasthesiologist and surgeon.

Case Report

A seventy five year old gentleman weighing 60 kg was posted for elective left sided inguinal hernia repair. His preanesthetic evaluation revealed that he was a known diabetic for 8 years, hypertensive for five years and also had history of MI and cardiac failure three years before. He was on medical management.

He was on T.Clopilet-A 75/150 mg od, T.Ramace 5mg od, T.Nitrocontin 2.6mg bd, T.Glycomet SR 500 mg bd. On physical examination he was well built ,weighing 78 kg pulse rate 80/min ,BP 140/90mm hg.CVS and RS examination within normal limits. Airway examination revealed short neck with Mallampatti grade-III. Spine examination was normal.

Investigation revealed Hb of 11.8gm and other CBC parameters , blood sugars, renal function and coagulation profile were within normal limits. ECG showed LBBB , echo revealed dilated LA and LV, severe left ventricular dysfunction, LVEF 20% with grade 1 diastolic dysfunction. Chest X ray showed Cardiomegaly and serology test was normal.

The case was accepted under ASA PS III and written informed consent was obtained. Patient was asked to stop T.Clopilet A seven days before surgery and rest of the medications except OHA were conrinued till the day of surgery.

Patient received T.Diazepam 10mg and T.Ranitidine 150mg previous day night. After shifting patient to operation theatre standard monitors pulse oxymetry, NIBP and ECG monitor were attached. A wide bore (16G) intravenous cannula was placed and Ringer's lactate started at a rate of 50ml/hour.

Our plan of anaesthetic management was left sided Illioinguinal and Illiohypogastric nerve block (modified Hernia block). After aseptic preparation modified hernia block attempted. Patient in supine position, left anterior superior iliac spine identified and point was marked 2cm medial and 2cm superior from it. After local infiltration with 2% Lignocaine, a small puncture was made in the skin with a 22g hypodermic needle to allow subsequent easy negotiation of 20G blunt needle. A 20G blunt needle was inserted perpendicular to skin at the puncture site. Once the needle pierced skin , it was withdrawn back so only just tip of the needle remained beneath the skin. As the needle advanced through the external oblique muscle, a loss of resistance was appreciated and needle entered the plane between external oblique and internal oblique. After negative aspiration of blood 2ml of local anesthetic (0.5%Bupivacaine + 2% Lignocaine with adrenaline 1:200000)was injected. The needle was inserted further until another loss of resistance was noted as the needle passed through the internal oblique muscle to lie between it and transversus abdominis muscle where another 2ml of local anesthetic was injected. The needle was withdrawn and same procedure was repeated two more times in a fan like distribution between Internal oblique and external oblique and then internal oblique and transversus abdominis muscle. A total 12ml of Local anesthetic solution was used to block ilioinguinal and iliohypogastric nerves. Subsequently, genitofemoral nerve block was performed immediately proximal to the pubic tubercle on the line joning ASI with pubic symphysis with 5ml of local anesthetic in both directions. Further 5ml of local anesthetic was loaded and handed over to the surgeon for injecting at the neck of hernia sac by the surgeon before opening the sac to avoid discomfort the patient. A total of 22ml of local anesthetic was used for the entire procedure. Twenty minutes after performing the block the surgical incision site and inguinal region was assessed for anesthesia. After confirming the adequacy of block, surgery was started and lasted for one and a half hours. Intraoperatively analgesia was adequate and patient was comfortable. Hemodynamics were stable throughout the procedure. Post operatively patient was observed in the recovery room for one hour and then shifted to the surgical intensive care unit. Post operative pain relief was achieved by Diclofenac sodium 100mg rectal suppository BD and Inj. Pentazocine 30mg im BD for two days. Rest of the hospital stay was uneventful.

Discussion

IHD patients with severe LV dysfunction (EF<35%) are considered to be high risk for anesthesia due to life threatening arrhythmias and development of perioperative MI which leads to sudden cardiac arrest and death. The major goals of perioperative management of these patients include avoidance of hypotension, tachycardia, hypothermia and good pain relief post operatively. With modified hernia block we can achieve above mentioned goals easily and effectively. Modified hernia block is a safer technique in comparison to neuraxial blockade and general anesthesia as it provides better hemodynamic stability and allows for early ambulation. This technique also provides better post operative pain relief as a part of multimodal analgesia in comparison to general anesthesia.

Conclusion

Modified hernia block is an easy to perform, safe, effective, economic

Volume : 5 | Issue : 12 | December-2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

and alternative modality for an elderly patient with IHD with severe LV dysfunction compared to other anesthetic techniques.

References:

1. Jin, Chung F.(2001). Minimizing perioperative adverse events in the elderly. Br J Anaesth, 87(4), 608-624.
2. Anaesthetic Consideration In Cardiac Patient undergoing non Cardiac surgery. By TK Kaul IJA 2007; 51(4): 280-286
3. Gultekin FA, Kurukahvecioglu O, Karamercan A, Ege B,Ersoy E and Tatlicioglu E (2007). Aprospective comparison of local and spinal anesthesia for inguinal hernia repair. Hernia 11 153-156.
4. Ozgun H,Kurl I and Cevikel MH (2002). Comparison of local,spinal and general anesthesia for inguinal herniorrhaphy. European Journal of Surgery 168 455-459.
5. Milter's anaesthesia 8th edition. Chapter 57 peripheral nerve blocks page1736.
6. Priebe HJ. Perioperative myocardiac infarction aetiology and prevension. Br J Anaesth 2005; 95:3-19.
7. Priebe HJ. Triggers of perioperative myocardial ischemia and infarction Br J Anaesth 2004; 93:9-20.