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CASE REPORT

ULTRASOUND GUIDED POPLITIAL SCIATIC NERVE BLOCK IN A PATIENT WITH IHD

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ABSTRACT

Introduction: Anaesthetic management in a patient with co existing cardiac disease is always a challenge especially when it is an emergency. Peripheral nerve blocks are always safer than centrineuraxial anaesthesia or general anaesthesia in a patient suffering from ischemic heart disease (IHD), use of USG makes block more specific.

Case report: A 63 yrs old male suffered from crush injury of left foot was posted for emergency debridement and external fixation. History ECG and ECHO suggested old IHD. Patient was suffering from crush injury with fractures of talus and calcanium so the patient had to be operated Popletial sciatic nerve block with supplementation of saphenous nerve block was planned. Patient was made to lie prone, ultrasound probe was placed in popletial fossa in the crease. popletial artery was identified probe was moved 6 cm proximal to crease where sciatic nerve divided into tibial and common peronial Intraoperatively patient was haemodynamically stable without any variation in BP or pulse. Patient did not have pain for 24hours post operatively.

Conclusion: Regional nerve blocks are safe in patients with IHD with good postoperative analgesia using ultrasound guidance reduces the risk of inadverant vascular injury , the procedural time and procedure-related pain and increases patient satisfaction compared to nerve stimulation while providing similar block characteristics.

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INTRODUCTION

Anaesthetic management in a patient with co existing cardiac disease is always a challenge especially when it is an emergency. The mainstay of preoperative evaluation remains obtaining of a comprehensive medical history and a physical examination, evaluation of severity of disease and associated risk factors, optimisation of medical therapy, choice of appropriate anaesthetic technique.[1] Peripheral nerve blocks are always safer than centrineuraxial anaesthesia or general anaesthesia in a patient suffering from ischemic heart disease (IHD), use of USG makes block more specific.

Case

A 63 yrs old male suffered from crush injury of left foot was posted for emergency debridement and external fixation, on history Patient was not a known case of any chronic illness, he was known smoker since 30 yrs and had breathlessness on exertion since 1 year. On examination BP: 160/90 mm of Hg, Pulse:80/min, spO2:95% on air Mallampatti grade 1. Airway was adequate. CVS:S1S2 heard, no murmurs heard RS: barrel shaped chest, occasional ronchi Investigations HB:10.5 gm%, BT:1.5 min, CT: 5.5 min, RBS:72 mg/dl, s.creatinine :1.9mg% , chest x ray :B/L emphysematous changes, tubular heart, ECG: LBBB with 1st degree block, ECHO: IHD with LVEF 38%.

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MATERIALS AND METHODS

Patient was suffering from crush injury with fractures of talus and calcanium so the patient had to be operated. High risk consent was obtained and was accepted under ASA III E Popletial sciatic nerve block with supplementation of saphenous nerve block was planned. All ionotropics and emergency drugs were kept ready. Pre medication - inj. ondansetron 4mg, inj pantoprazole: 40 mg , midazolam 2 mg, inj fentanyl 60 mic. Patient was made to lie prone, ultrasound probe was placed in popletial fossa in the crease. popletial artery was identified probe was moved 6 cm proximal to crease where sciatic nerve divided into tibial and common peronial. The injection site was prepared with betadine. A local anesthetic (3 mL of lidocaine, 1.0%) was infiltrated subcutaneously at the site of planned needle insertion. A 23 G

spinal needle was passed in plane, once needle was in correct location local anaesthetic (2% lignocaine and 0.5% bupivacaine with 4 mg dexamethsone) was injected 35ml around nerve. Saphenous nerve was blocked below the knee at the level of medial femoral and medial tibial condyle Subcutaneously7 mL of local anesthetic solution in a transverse line from the posteromedial to the anteromedial aspect of either condyle was infiltrated. The motor block was graded with a modified Bromage scale similarly, the sensory block was evaluated with Pin prick. Operative Procedure was performed after 15 min when Patient was comfortable without haemodynamic changes with motor block of bromage scale2 and no sensation to pin prick. Intraoperatively patient was haemodynamically stable without any variation in BP or pulse. Patient did not have pain for 24hours post operatively.

DISCUSSION

Patients having any sort of cardiac ailment need to be evaluated properly preoperatively (Stoelting and Dierdorf, 2002). Patient suffered from severe crush injury so patient was posted for emergency debridement and external fixation which is intermediate risk operation. (Eagle *et al*., 2002) Patient had risk factor of old age and chronic smoking with IHD, as the patient was intermediate risk (Goldman *et al*., 1977). Pre operative management in emergency surgery include optimization with medical management. Centrineuraxial anaesthesia is not proved superior to general anaesthesia in case of cardiac diseases, side effects like hypotension, bradycardia, postdural puncture headache, and urinary retention in spinal anaesthesia are not seen in peripheral nerve block. Premedication with bezodiazepine and fentanyl given to relieve anxiety. Intraoperative popletial sciatic nerve block using ultrasound guidance reduces the risk of inadverant vascular injury, the procedural time and procedure-related pain and increases patient satisfaction compared to nerve stimulation while providing similar block characteristics. (Sala-Blanch *et al*., 2012; Manickam *et al*., 2008)

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