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WIDE AWAKE SURGERY USING LOW VOLUME PHRENIC NERVE SPARING INTERSCALENE AND LOW VOLUME SUPERFICIAL CERVICAL PLEXUS BLOCK FOR CLAVICLE NON-UNION WITH PLEXOPATHY

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Background and Aims Severe respiratory disease presents a challenge for anaesthesia in shoulder surgery. Awake surgery under interscalene block may be considered. However, the reduction in FEV1 and FVC due to phrenic nerve palsy may be prohibitive. Numerous techniques have been described as phrenic nerve sparing for shoulder analgesia. However, there is limited published data regarding effectiveness in anaesthesia for awake shoulder and clavicular surgery.

Methods We describe a case of a 64-year-old male undergoing brachial plexus exploration with open reduction and internal fixation for clavicle non-union. Following an injury 10 months previously, he presented with medial cord symptoms; sensory deficit predominately in the ulnar nerve distribution and hand weakness. Significant comorbidities included severe COPD with a FEV1 <27%.

A low volume phrenic nerve sparing interscalene block with superficial cervical plexus block (5 ml of 0.5% Bupivacaine with Adrenaline for each) was performed under ultrasound guidance. The skin and subcutaneous layers were infiltrated with 10 ml of 1% Xylocaine with Adrenaline as a field block.

Results Using a direct approach to the clavicle, the non-union was excised and fracture ends debrided. The inferior periosteum was carefully elevated off the clavicle to protect the brachial plexus. There was an intraoperative improvement in ulnar nerve symptoms observed when the lateral clavicle was reduced. There was no evidence of clinically significant phrenic nerve involvement; oxygen saturations were stable and the patient remained comfortable with no respiratory symptoms.

Abstract 192 Figure 1

Conclusions Low volume regional anaesthetic techniques can facilitate awake shoulder and clavicular surgery without clinically significant phrenic nerve involvement in selected patients.

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SUPRA-INGUINAL ILIAC FASCIA BLOCK AS SOLE ANESTHETIC TECHNIQUE FOR FEMORAL NAILING SURGERY

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Background and Aims Regional anesthesia, which includes peripheral nerve blocks, contributes to a multimodal analgesic approach. Iliac fascia block is an alternative or complementary analgesic technique for knee, thigh and hip surgery.

Methods 93-year-old man, ASA IV, with history of hypocoagulated atrial fibrillation, NYHA Class III heart failure, benign prostatic hypertrophy, hypertension, diabetes, dementia and dyslipidemia scheduled for femoral intramedullary nailing.

Given the patient's comorbidities and general condition, with his possible intolerance to the hemodynamic rebound produced by general or spinal anesthesia, the team decided to resort to iliac fascia block as an anesthetic technique.

Caregiver's consent to anesthesia was obtained.

To perform the block, a suprainguinal ecoguided approach was used. A linear probe was placed immediately below the antero-superior iliac spine (ASIS). The ASIS was identified and the probe placed transversely and rotated towards the umbilicus. An out of plane technique and a 50 mm needle were used and 20 mL of 1.5% mepivacaine and 20 mL of 0.375% ropivacaine were injected into the fascial iliaca.

The block was tested after 40', with loss of sensitivity and muscle strength in the area of the LCFN and FN. The surgery began 50' after the block. 15' and 25' into surgery, 30 mg and 70 mg of propofol were administered, respectively, due to patient agitation.

Results The surgery lasted 60' and there were no complications or episodes of hemodynamic instability.

Conclusions The anesthetic approach used may be another option in hemodynamically unstable patients in which the most common anesthetic techniques incur an important hemodynamic rebound.

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THE EFFECT OF FEMORAL NERVE BLOCK VERSUS ADDUCTOR CANAL BLOCK ON THE QUALITY OF EARLY RECOVERY AFTER REVISION TOTAL KNEE ARTHROPLASTY, A RETROSPECTIVE STUDY

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Background and Aims Multimodal pain analgesia strategies are common in perioperative management of total knee arthroplasty (TKA), although the role of adductor canal blocks (ACB) versus femoral nerve block on early postoperative recovery for revision knee surgery is not investigated. The purpose of this study is to independently evaluate the effect of ACB on short-term postoperative outcomes including (1) length of stay (LOS), (2) postoperative narcotic utilization, and (3) function with physical therapy in revision TKA.

Methods We retrospectively identified a cohort study of consecutive 40 patients from January 2019 to July 2019 who had undergone unilateral revision TKA using a single-shot ACB (19 patients) vs femoral nerve block (21 patients) under spinal anesthesia (hyperbaric 0.5% Marcaine 2.5 ml and 20 microgram fentanyl) in addition to a standardized multimodal pain analgesia protocol. These 2 groups were compared using independent sample t-tests with primary end points of interest being distance ambulated after surgery, and inpatient narcotic use.

Results Quadriceps strength was better preserved in adductor group than in femoral group. Walking meters and going

upstairs were better results in adductor group. IV morphine consumption within the first 48 hours period were less in adductor group comparing to femoral group.

Conclusions Adductor nerve block showed better early recovery in revision TKA when comparing to femoral nerve block (FNB).

195 INTERMEDIATE CERVICAL PLEXUS BLOCK FOR INTERNAL JUGULAR VEIN CATHETERIZATION IN ONCOLOGY PATIENTS. A PROSPECTIVE, RANDOMIZED STUDY

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Background and Aims Internal Jugular Vein Catheterization (IJVC) in oncology patients can be challenging, as most of these patients have undergone multiple painful procedures and fear of pain. This study aims to determine whether intermediate cervical plexus block (ICPB) is superior to conventional local anesthesia in terms of satisfaction of the patient for IJVC.

Methods 30 oncology patients, ASA III, were randomly divided into two groups. In Group A (n=18), ICPB with lidocaine 2% (5 ml) was administered to the patients, 5 minutes before the placement of the central venous catheter (CVC). In Group B (n=12), conventional local anesthesia with lidocaine 2% (5 ml) was administered at the site of the catheterization, 5 minutes before the placement of CVC. The procedure in both groups was ultrasound-guided. The duration, complications and VAS score of the procedure along with patient's satisfaction of the procedure were recorded. Patient's vital signs were recorded throughout the procedure.

Results No complications were reported in both Groups. The mean duration of the procedure was not statistically significant between the two groups. VAS scores and Satisfaction Scores were found to be statistically significant between the two groups.

Conclusions In this study, the performance of ICPB in oncology patients undergoing IJVC was found to provide superior analgesia and comfort to the patients when compared to

conventional local anesthesia. To the authors' concern there are no studies exploring the superiority of ICPB as a means of analgesia to patients undergoing IJVC. Certainly, more studies should be performed for further confirmation of these findings.

196 INNOVATIVE AND HI-FIDELITY SIMULATOR FOR FASCIAL PLANE BLOCKS

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Background and Aims Ultrasound guided regional anesthesia (UGRA) is an invasive procedure that involves complex motor skills.¹ As ultrasound-guided regional anesthesia (UGRA) represents the gold standard for performing regional blocks, there is a need for learning the technical skills associated with this technique.^{2,3}

Methods We developed a innovative and high-fidelity system simulator for ultrasound-guided fascia blocks based on real ultrasound images, named Block Sim™, made by Accurate.

Results Block Sim allows us to practice on: anterior thoracic wall blocks [PECS I, PECS II, serratus plane block and parasternal block (figure 1)], paraneuraxial nerve blocks (Paravertebral block and erector spine plane block (ESP), and abdominal wall blocks (transversus abdominis plane block (TAP), quadratus lumborum block (QLB I e II). Thanks to the ultrasound probe software, this new simulation system allows the physician to view real ultrasound images. Users can move the ultrasound probe in different directions on the available insert and observe a coherent real-time modification of the scene. Users can also perform a simulated injection of the local anesthetic, using an external syringe, when the tip of the needle is inside of the fascia. The user can practice and develop competency using simulation scenarios based on real clinical images and, at the end of the procedure, an indicative global score will be given to the user based on his performance.

Conclusions We believe that the use of simulators is very important, first of all for patient safety, and for anesthetists who can finally make mistakes to learn.

Abstract 196 Figure 1 B real Ultrasound images C,D BlockSim's images