COMPARATIVE STUDY OF ULTRASOUND ASSISTED VERSES CONVENTIONAL SURFACE LANDMARK GUIDED TECHNIQUE FOR COMBINED SPINAL EPIDURAL PLACEMENT IN DIFFICULT SURFACE ANATOMY OF LOWER BACK: A PROSPECTIVE RANDOMISED CONTROL TRIAL

Background and Aims Background: To establish the puncture point for Combined Spinal Epidural (CSE) via conventional surface landmark assisted technique may be difficult in patients with obesity, degenerative spinal diseases and kyphoscoliosis, large prick numbers. The study to compares the success rate of placement of CSE via midline approach in first attempt of needle puncture in patients with difficult surface anatomy of lower back between surface landmark assisted group (SLG) and ultrasound assisted groups (USG).

Methods Method: Randomized prospective study done with sample size (n= 50) each in the two groups SLG and USG. In USG vertebral space was scanned preoperatively and puncture point marked and in SLG puncture point was assessed by palpation of the surface landmarks. CSE was performed, efficacy of motor and sensory block was assessed. Primary outcome measured in the form of successful placement of CSE in first attempt of needle puncture.

Results Result: CSE was placed successfully in first attempt in 30 patients of SLG group and 46 patients of USG group with significant p value of 0.0003. Time taken for establishing surface landmark was 1.45±.47 minutes in USG group and 0.79±.34 minutes in SLG group with p value of <.001.

Conclusions Conclusion: The use of ultrasound to mark the needle insertion point by assessing spinal anatomy for central neuraxial block increases the success rate of CSE in first attempt of needle insertion as compared to traditional surface landmark guided technique in patients with difficult surface anatomy of lower back. Other significant outcomes still to be describe.

A RADIOLOGIC AND ANATOMIC ASSESSMENT OF SPREAD OF INJECTATE USING TWO DIFFERENT MECHANICAL INFUSION PUMPS

Abstract EP096 Figure 1 scanning and marking of back

Abstract EP096 Figure 2 On of the images showing posterior complex and technique to measure

Abstract EP096 Figure 3 Midline determined by spinous process

Abstract EP096 Figure 4
Background and Aims Recently a novel infusion pump strategy, mimicking manual intermittent bolus (MMIB) with increased flowrate, has been developed. This study aims to compare the effects of continuous infusion regimen with MMIB regimen in five different nerve blocks in fresh human cadavers.

Methods The Institutional Review Board of Ethics of Penn State College of Medicine, USA approved this study for exemption for being a nonhuman. Bilateral ultrasound-guided peripheral nerve catheters (Pajunk® E-cath kit) were placed at five locations in two fresh cadavers. 10ml of iodinated contrast material diluted in methylene blue dye were injected using either a Smith CADD™ or PainGuard™ pump. Within 20-min of injection the cadavers scanned using computer tomography (CT), then cadavers were taken to a laboratory and anatomical dissection of the cadavers was subsequently performed. The extent of methylene blue staining of muscles, nerves, fascial planes and tissues in each hemi-abdomen was photographed and documented. Descriptive statistics and unpaired t-tests were performed.

Results The MMIB infusion regimen provided greater spread for the four injections in both cadavers compared to the continuous regimen, (figure 1 and 2) but these differences were not statistically significant. (table 1a and 1b) There was significance (p<0.001 in the extent of dye spread between the male and female cadavers (table 2a and 2b).

Conclusions This preliminary study demonstrates a probable role of increase in flow rate of the infusion in future practice of continuous nerve blocks.

Background and Aims Dronabinol is an FDA-approved synthetic delta-9-tetrahydrocannabinol medication indicated for chemotherapy-induced nausea and vomiting and cachexia associated with AIDS. It can also be used off-label for various reasons. The primary aims of this institutional retrospective chart review study were to determine the prevalence of and reasons for inpatient dronabinol use in orthopedic surgical patients. We hypothesized that dronabinol is being prescribed off-label to surgical patients to manage perioperative pain.

Methods After IRB approval, patients who received hospital-administered dronabinol at a large, urban, high-volume orthopedic surgery hospital were identified. Demographics, co-morbidities, preoperative cannabinoid use, surgery characteristics, and prescriber data were extracted from cases between December 2020 and 2022.

Results Inpatient dronabinol use increased between 2020 and 2022 but was prescribed in <0.5% of all surgical admissions (figure 1). Preliminary review of 249 cases revealed that 91.2% (n=227) of patients used cannabis or cannabidiol prior to admission. Dronabinol was explicitly prescribed for pain management (9.6%, n=24), reduction of postoperative nausea and vomiting (3.6%, n=9), appetite stimulation (5.2%, n=13), sleep (3.2%, n=8) and prevention or mitigation of cannabis withdrawal symptoms (4.0%, n=10) during hospitalization. Physician assistants ordered 47.8% (n=119) of the inpatient prescriptions (table 1).