

Regional Anesthesia in Patient with Cirrhosis Undergoing Upper Extremity Orthopedic Surgery: A Case Report.

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INTRODUCTION

- Anesthetizing patients with liver disease poses challenges
- Regional anesthesia can minimize the use of drugs with more systemic effects
- Coagulopathy in this patient population can be a concern for regional anesthesia

METHODS

- As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per Mayo Clinic policy 45 CFR 46.102. Patient consent was obtained for this case report’s use and publishing.

CASE

72-year-old man with right elbow olecranon bursitis presented for olecranon bursa excision.

- ASA IV, BMI 37, HTN, pHTN; OSA, CKD stage 3b. T2DM
- Compensated alcoholic cirrhosis complicated by portal HTN, esophageal varices, gastric antral vascular ectasia and thrombocytopenia
- History of delayed emergence under general anesthesia
- MELD-Na and MELD 3.0 scores of 15
- TTE with estimated RVSP 32 mmHg, concentric LV remodeling, LVEF 64%

Perioperative management and course:

- Axillary block with 30 mL of bupivacaine 0.5% with 1:200,000 epi
- MAC with 35 mcg/kg/min propofol infusion
- Dexmedetomidine (20 mcg total) and IV remimazolam (10 mg total)
- Additional 100 mg ropivacaine around the bursa by the surgeon.
- Hemodynamic support maintained with phenylephrine and glycopyrrolate pushes

Postoperative course:

- Pain score was 0/10 with appropriate sensory and motor blockade
- No additional pain medications
- Discharged home



Figure 1: Photo after surgical incision of right elbow olecranon bursitis for excision

Regional anesthesia can provide adequate anesthesia with a quick recovery while limiting dosage and number of medications as compared to general anesthesia.

Patients with liver disease with abnormal coagulation studies may still be candidates for regional anesthesia.

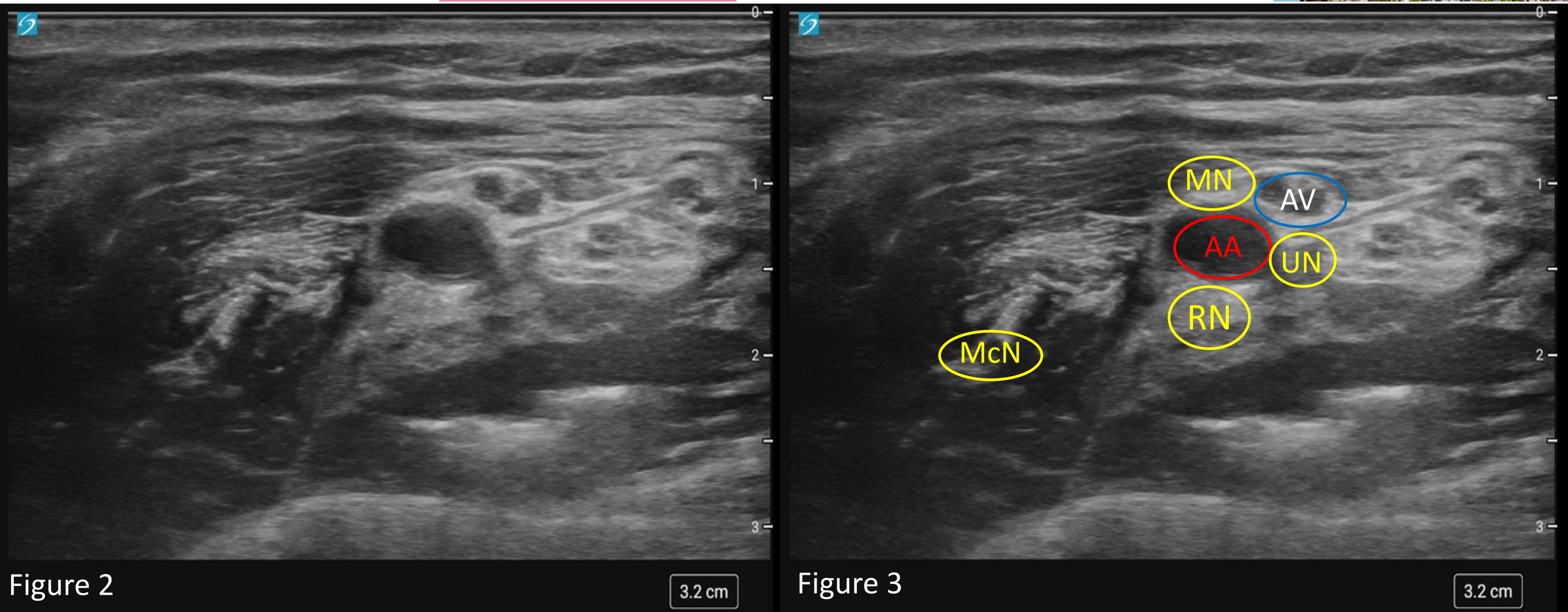


Figure2 : Ultrasound guided axillary block on the patient

Figure 3: Ultrasound image labeled; AA: axillary artery; AV: axillary vein; MN: median nerve; UN: ulnar nerve; RN: radial nerve; McN: musculocutaneous nerve

DISCUSSION

- The literature is sparse on patients with cirrhosis undergoing regional anesthesia.
- An axillary nerve block was ultimately pursued given the reduced risk of phrenic nerve palsy and pneumothorax compared to other potential blocks.
- An axillary peripheral nerve block paired with safe sedation in the setting of pulmonary hypertension was a viable option for our patient undergoing elbow surgery.
- We minimized the use of anesthetic drugs during the surgery, and the patient had a quick recovery free from complications.
- More research is needed to evaluate the potential benefits of regional anesthesia over general anesthesia in patients with cirrhosis complicated by suboptimal coagulation studies.

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