

External Oblique Intercostal Plane Nerve Block Placement with Liposomal Bupivacaine for Open Splenectomy

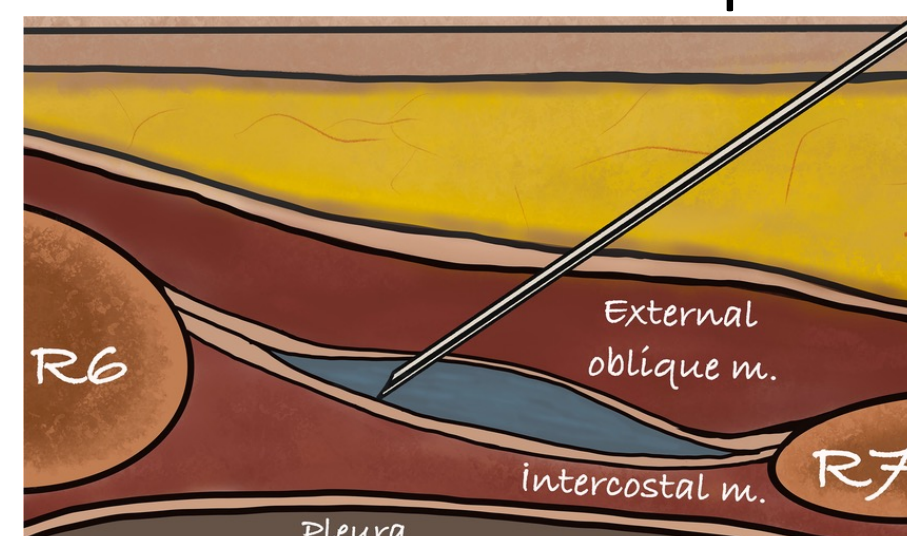
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CASE PRESENTATION

- 77M with Splenomegaly with mild pancytopenia due to a lymphoproliferative process. Other PMH includes HTN, BPH, and Chronic pain scheduled for an open splenectomy
- Past surgical history included Spinal fusions.
- Labs showed mild anemia, thrombocytopenia with normal coagulation studies, electrolytes with stable vital signs with a BMI of 20.7 kg/m².
- CT imaging of the abdomen showed splenomegaly measuring 28.1 cm in the craniocaudal dimension.
- External oblique intercostal plane block (EOIPB) was performed** given the that the surgical incision would be in the high upper abdomen in the left lateral position. The patient was placed standard monitors and low dose IV fentanyl was administered
- Left upper abdomen was prepped in a sterile fashion and an in-plane approach was taken with 20mL of 0.25% Plain Bupivacaine solution with 133mg of Liposomal bupivacaine was administered. The remainder of the anesthetic course was uneventful.
- Analgesia effect for a total duration till POD #3 with minimal opioid use. **highest pain score was 4/10 up to POD #3**
 - Total 41 MME through POD #3
 - 15 MME's on POD#3.
- Due to the complex medical history of this patient, his hospitalization was prolonged due his concurrent hematologic malignancy

BACKGROUND

- The External Oblique Intercostal (EOI) plane block is a novel approach for upper abdominal surgeries. Prior to its development alternative analgesic strategies included neuraxial, deep plane blocks and patient-controlled analgesia devices. The EOI plane block has a similar risk profile to that of the erector spinae plane block and it is relatively superficial. In current literature, there are minimal studies describing it in either single shot or catheter-based techniques.



FIGURES & IMAGES

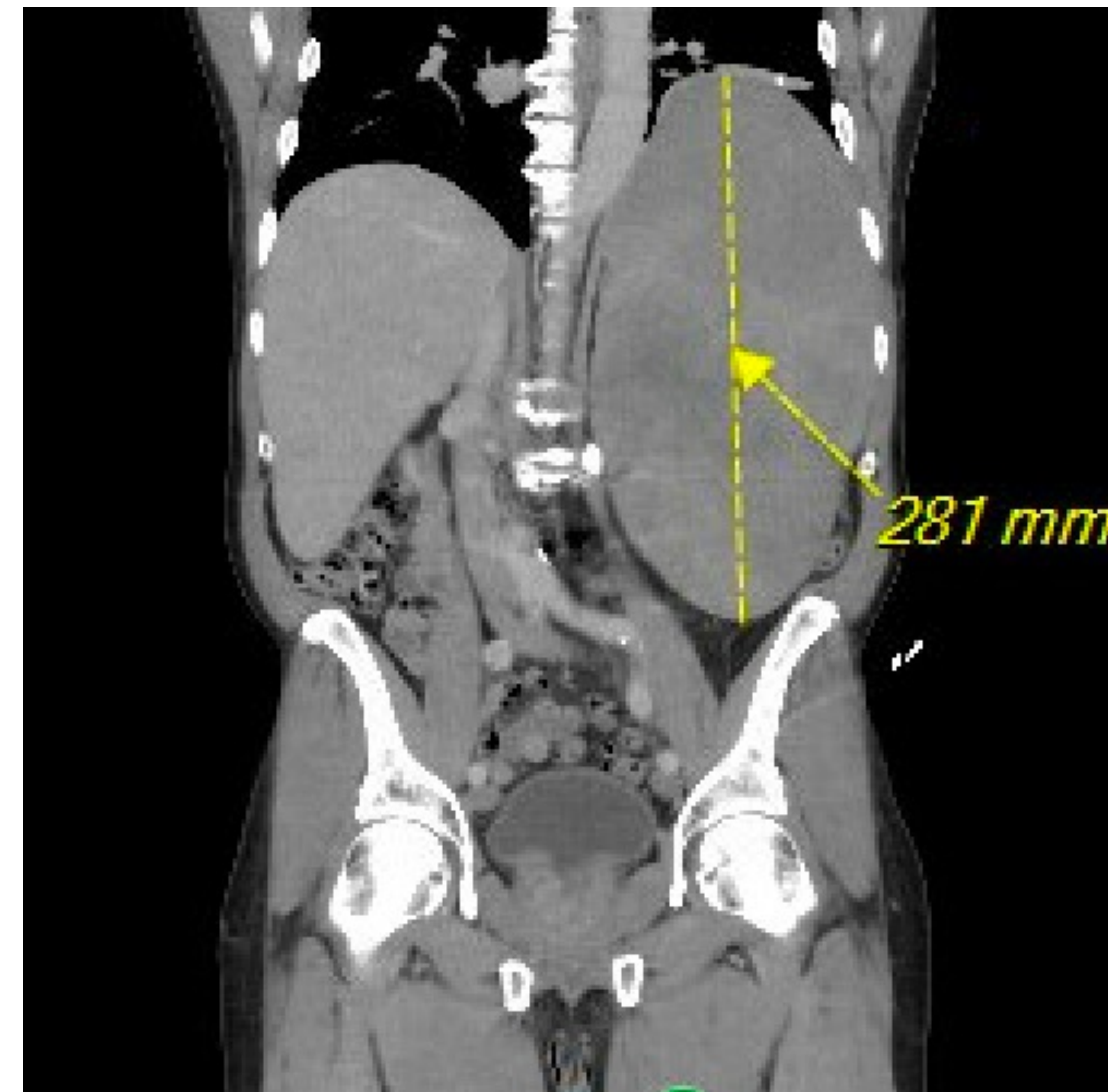


Figure 1: CT scan without contrast of abdomen denoting splenomegaly

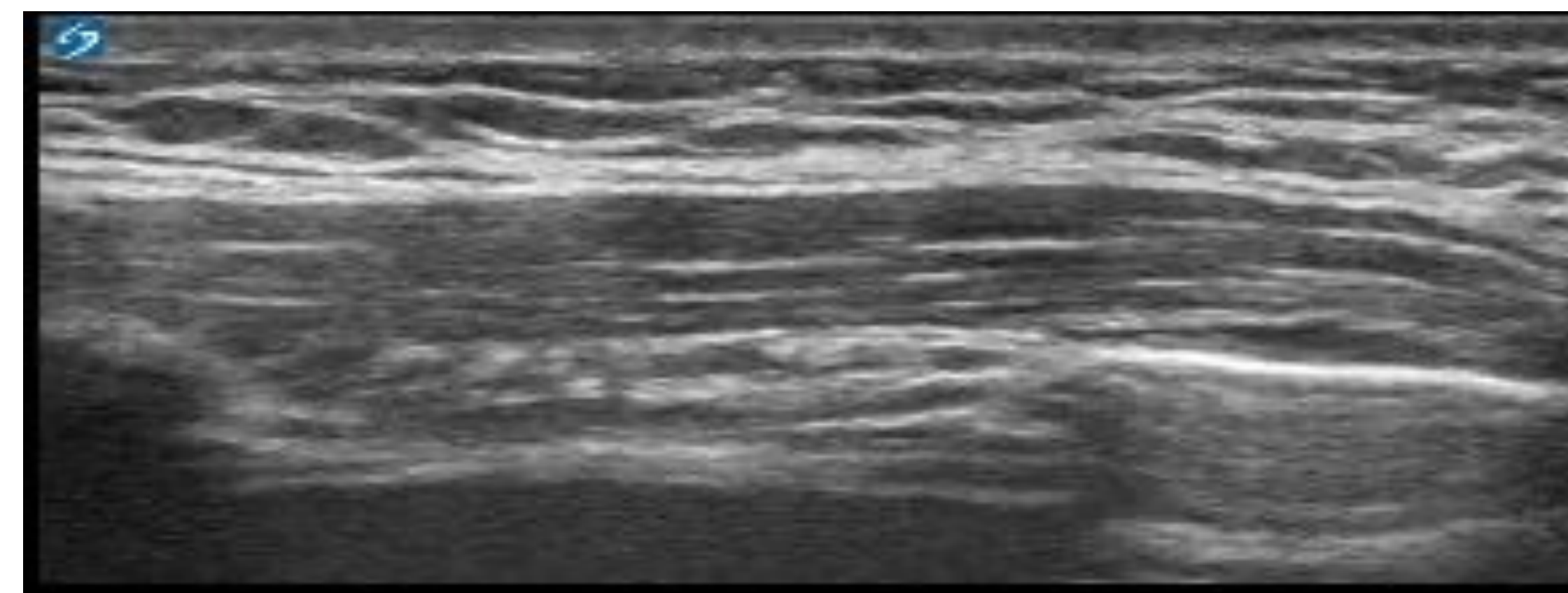


Image 1-2:

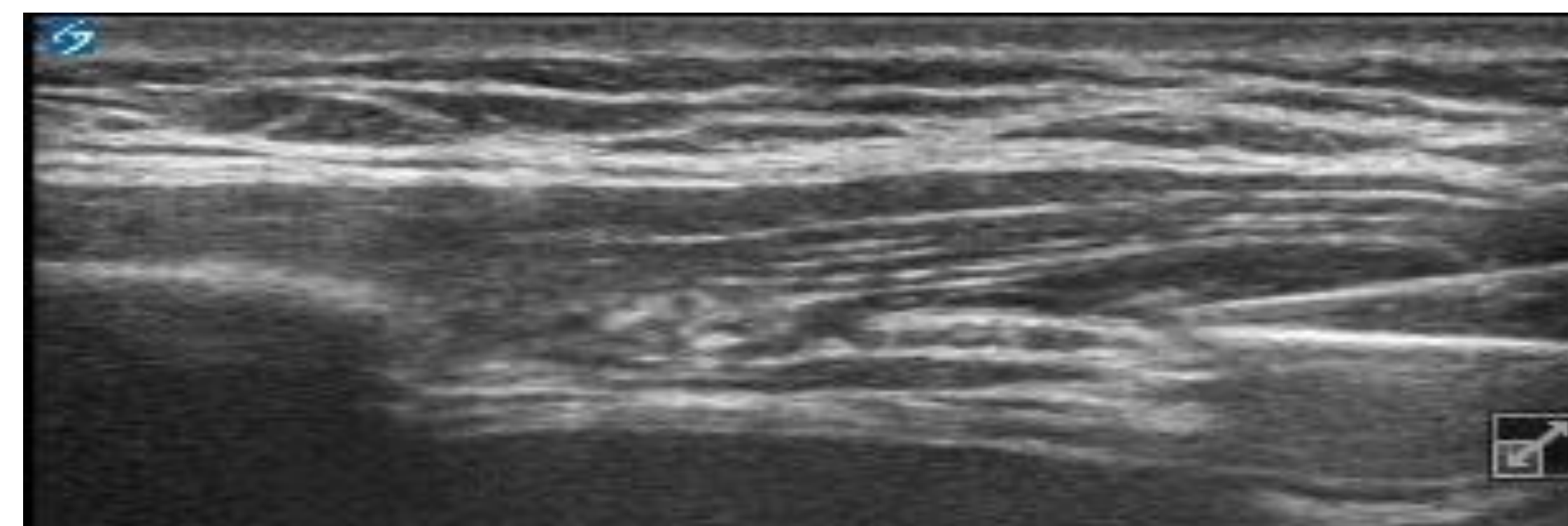


Image 1-2:Sagittal Plane View of Ultrasound of the External Oblique Block (EOB)

DISCUSSION

- First described by Coşarcan et al in accessing the EOIP plane compared to the Transversus abdominus plane in obese patients.
 - reduced adipose deposition when compared to the TAP blocks in higher BMI patients
 - opioid requirements and analgesic scores lower than ESPB's and was similar to the a TAP with Rectus sheath block.
- Relative risks of the EOIPB are
 - Pneumothorax
 - LAST
- To cover the anterior and lateral cutaneous branches of the intercostal nerves in an EOIPB requires approximately 29mL of dilute local anesthetic (Hesham Elsharkaway et al); similar to a TAP block.
- Dermatomal **sensory block from T6-T10** at the **anterior axillary line** and **T6-T9 at the midline**.
- This block is a superficial block and provides cutaneous analgesia:
- Further research is needed to determine the optimal dose and volume of local anesthetic. However, this technique holds promising utility for upper abdominal surgeries

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