**B16** BILATERAL ERCTOR SPINAES PLANE BLOCK AFTER TOTAL ABDOMINAL HYSTERECTOMY: A CASE SERIES

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Background and Aims Total abdominal hysterectomy (TAH) is associated with moderate to severe postoperative pain. Poor pain control impairs recovery after surgery and delays home discharge. Ultrasound-guided (UG) erector spinae plane block (ESPB) has been shown to provide effective analgesia in thoracic procedures, however its efficacy in abdominal surgery is still sparse in the literature. The authors describe the use of preoperative bilateral ESPB to provide analgesia in TAH.

Methods Eleven patients were scheduled for TAH. US-guided cranio-caudally, single-shot ESPB was performed bilaterally at T9 level, with the patient in sitting position (Figure 1). 15 to 20 ml of ropivacaine 0.375–0.5% was administered per side. Standard general anaesthesia was administered afterwards. Written informed consent was obtained from all patients.

Results Postoperative analgesia included paracetamol 1 g 6/6h and ketorolac 30 mg 12/12h. Six patients reported a numeric pain rating scale < 4 and did not require rescue analgesia (meperidine 20 mg iv) in the first 24 hours (Table 1). No side effects or complications were recorded. The most common complaint was urinary discomfort caused by the Foley catheter. All patients were discharged home 2 days after procedure.

Conclusions ESPB is an effective and safe option for acute pain control after TAH, reducing opioids consumption and the need for a more invasive technique as epidural analgesia. However, performing the block at T9 level might have contributed to urinary discomfort described by some patients. Future research on the ideal local anesthetic volume, concentration and level of blockade might improve the results.

**B17** ULTRASOUND-GUIDED LUMBAR PLEXUS BLOCK PARASAGITTAL OR TRANSVERSAL SHAMROCK APPROACH: DO WE HAVE THE SAME EXPECTED L4 LEVEL?

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Background and Aims Ultrasound-guided lumbar plexus block (ULPB) can be performed using two approaches: a parasagittal (PSA) or transversal (TA). The PSA and TA have been described targeting the location of transverse process of the 4th lumbar vertebra (L4). A higher approach may promote organ puncture complication. We hypothesised that TA ULPB might promote a higher level of puncture than expected.

Methods After informed consent, 50 volunteers were studied. Each volunteer was landmarked bilaterally, using PSA and an invisible ink pen from T12 to L5 transverse process location. A landmarked horizontal line parallel from both iliac crests was drawn. We named this line “C”. Once we obtained the typical image of ULPB using TA passing from line C, we oriented caudally and cephalad the probe to visualise the lumbar plexus on the level directly above and under. We named these lines “>C” for the level above and “<C” for the level under.
Results The demographic characteristics are described on the table below. On 100 compared approaches, we reported that a ULPB with a TA is projected between the transversal process of L3 and L4 (51%), L4 (21%) and L3 (9%). By tilting the probe we can access up to L1 transverse process (1%). Lumbar plexus was not visualized in 12% of cases in PSA and in 1% in TA.

<table>
<thead>
<tr>
<th>Abstract B17 Table 1</th>
<th>Demographic characteristics</th>
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<tr>
<td>Age, yrs, mean (SD)</td>
<td>30.2 (2)</td>
</tr>
<tr>
<td>Sex (M/F)</td>
<td>38/22</td>
</tr>
<tr>
<td>Weight, kg (SD)</td>
<td>68 (14)</td>
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<tr>
<td>BMI, kg/m² (SD)</td>
<td>23.3 (3.2)</td>
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</table>

Conclusions A TA for an UPLB leads to an unexpected higher level than L4. We recommend to perform a previsualization with a PSA to strictly identify a L4 level of puncture.

Background and Aims Inadvertent intraneural injection is not infrequent during peripheral nerve blocks. To this end, injection pressure monitoring is suggested as a safeguard method that warns of a potentially hazardous needle tip location. However, doubts remain if this method is superior to the sonographic nerve swelling in terms of earlier detection of the intraneural injection.

Methods A cadaveric study was designed to assess injection pressures during an ultrasound-guided intraneural injection of the median nerve. We hypothesized that the sonographic swelling occurred first than elevated injection pressures (>15 pound per square inch) using an in-line monitor. 33 injections of 11 median nerves from unembalmed human cadavers were performed at proximal, mid and distal locations. 1 ml of a mixture of local anesthetic and methylene blue was injected at 10 ml/min. Afterwards, dissection was performed to assess spread location. Videos of the procedures including ultrasound images were blindly analyzed to evaluate nerve swelling and injection pressures.

Results 31 injections were analyzed (2 were excluded due to uncertain needle tip location). >15 pound per square inch was attained in 6 injections (19%) following a mean volume of 0.7 ml. Nerve swelling was evident in all 31 injections (100%) with a mean volume of 0.4 ml. Upon dissection, spread was confirmed intraneural in all injections, with a proximal-distal longitudinal diffusion of an average 6 cm per injection.

Conclusions Ultrasound is a more sensitive and earlier indicator of the intraneural injection than injection pressure monitoring. Further research is required to consolidate the role of pressure monitors in the clinical setting.