Results: The demographic characteristics are described in the table below. In 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.

Abstract B17 Table 1

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Age, years, 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>
</tr>
<tr>
<td>BMI, kg/m² (SD)</td>
<td>23(3.2)</td>
</tr>
</tbody>
</table>

Abstract B17 Figure 2

Conclusions: A TA for an ULPB 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.

B18 ULTRASOUND IS SUPERIOR THAN INJECTION PRESSURE MONITORING DETECTING THE LOW-VOLUME INTRANEURAL INJECTION

Background and Aims: Adverse and 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.

B19 COMPARISON OF ONSET OF ACTION FOR ULTRASOUND GUIDED SCIATIC NERVE BLOCK AT PRE BIFURCATION AND POST BIFURCATION LEVEL IN PATIENTS UNDERGOING LOWER EXTREMITY SURGERY

Background and Aims: Sciatic nerve block is widely used alone or in association with other nerve blocks for lower limb surgeries. For below knee surgical procedures distal sciatic nerve block is frequently used. When long acting local anaesthetic such as Bupivacaine is administered irrespective of nerve localization technique complete sensory and motor block are often associated with slow onset of time which is usually 20 - 60 minutes. This study aimed to evaluate and compare the onset of action of sciatic nerve block when given proximal to its bifurcation and immediately after its bifurcation into Tibial and Common peroneal nerves under ultrasound guidance.

Methods: Ultrasound guided sub paraneural popliteal sciatic nerve block was performed in 50 patients undergoing lower extremity surgeries. These patients were randomly divided into group A and group B. Where in group A, patients received 20 ml of 0.5% Bupivacaine 8 cm above the bifurcation and in group B, patients received 20 ml of 0.5% Bupivacaine immediately after the bifurcation of sciatic nerve into Tibial and Common peroneal nerves. The performance time and adverse events were recorded.

Results: Patients in group A had shorter onset of both sensory and motor block compared to group B which is statistically significant.

Conclusions: A TA for an ULPB 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.

Abstract B19 Figure 1