Background and Aims The aim of our study is to compare medial and lateral approaches of the costoclavicular BPB which became procedure of choice for upper limb anaesthesia. We hypothesized costoclavicular block through medial approach would result in shorter performance time owing to favourable anatomy.

Methods After IEC approval, 60 patients participated, 30 in each group. In group M, needle was advanced in a medial to lateral direction, whereas in Group L, needle was advanced in lateral to medial direction. 20ml of 0.5% bupivacaine were used in both groups. The primary outcome assessed was performance time. The secondary outcomes preliminarily analysed were Imaging time, Needling time, Total Anaesthesia time, Anaesthesia success, Performer difficulty score. Further subgroup analysis concerning other outcomes are ongoing. As two patients were switched over to Group L due to unfavourable sono-anatomy, we ran statistical analysis by modified Intention to treat analysis and as per protocol analysis. We summarise results from mITT analysis.

Results The mean±SD for performance time (mins) were 11.9 ±3.8 in Group M and 9.4±4.1 in Group L with difference of mean (95%CI) of 2.4 (0.3 to 4.5) with p-value <0.05. Similarly, imaging, needling, total anaesthesia time were higher in Group M. Performer difficulty score (Grade 2&3) [66.67% vs 48.2%,p-value- 0.032] was also higher in Group M compared to Group L.
Abstract EP194 Table 2 Shows the performance time in performing the block by two approaches

<table>
<thead>
<tr>
<th>PERFORMANCE TIME</th>
<th>GROUP M</th>
<th>GROUP L</th>
<th>DIFFERENCE OF MEAN (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS PER RANDOMISATION</td>
<td>11.9 ± 3.8</td>
<td>9.4 ± 4.1</td>
<td>2.4 (0.3 to 4.5)</td>
<td>0.023</td>
</tr>
<tr>
<td>AS PER TREATMENT RECEIVED</td>
<td>11.7 ± 3.9</td>
<td>9.7 ± 4.2</td>
<td>2.0 (-0.05 to 4.2)</td>
<td>0.056</td>
</tr>
</tbody>
</table>

Abstract EP194 Figure 1 Shows box & whisker plot for performance time and secondary outcomes like imaging time, needling time, block onset time, total anaesthesia time and time to first postoperative analgesia

Conclusions Our findings revealed medial approach have no significant advantage over lateral approach with regards to performance time, imaging time, needling time, total anaesthesia time and performer difficulty but with marginally higher block success rate.

EP195 ULTRASOUND-GUIDED NEURAXIAL ANESTHESIA USING ACCURO HANDHELD DEVICE COMPARED WITH TRADITIONAL PALPATION TECHNIQUE: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

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Application for ESRA Abstract Prizes: I apply as an Anesthesiologist (Aged 35 years old or less)

Background and Aims Neuraxial anaesthesia is a common effective anaesthesia technique. Traditional palpation is the usual technique for detecting the vertebral interspace, but it has limitations. A novel hand-held ultrasound guidance device, Accuro, has been used recently. This systematic review and meta-analysis aimed to evaluate the efficacy and safety of ultrasound-guided neuraxial anaesthesia compared to traditional palpation in patients undergoing neuraxial anaesthesia.

Methods Randomized controlled trials were sought in six databases for a systematic review and meta-analysis. With a 95% confidence interval, a random-effects model calculated Risk Ratio or Mean Difference. Cochrane Risk of Bias tool assessed bias. Five RCTs were included, a total of 369 patients. This review was registered with PROSPERO with the identifying code CRD42023416937.

Results Five studies with a total of 369 patients met our criteria. The risk of bias in four studies was low and there was some concern in one study. First insertion success rate showed a favorable risk ratio for the Accuro compared to Palpation, the risk ratio was 1.44 [95% CI 1.01 – 2.05, P= 0.05]. Accuro caused a significant reduction in needle skin passes [MD -0.63; 95% CI (-1.05; -0.21); p<0.01], while failing to demonstrate a significant reduction in needle redirection [MD -1.31 (95% CI: [-2.71; 0.11], p = 0.07)]. Procedure time was significantly shorter in palpation [MD 127.82; 95% CI (8.68; 246.97); p=0.04]

Conclusions Accuro is effective in reducing the number of trials needed to perform a successful insertion for spinal anaesthesia and the results of our meta-analysis support the use of Accuro in clinical practice.