Pericapsular Nerve Group Block Combined with a Lateral Femoral Cutaneous Nerve Block Decreases Opioid Consumption After Hip Arthroscopy: A Retrospective Study

Lisa Reisinger, Geneewoo Hong, Edward Lin, Sang Jo Kim, Douglas Wetmore, Jiabin Liu, Genewoo Hong, Edward Lin, Sang Jo Kim, Douglas Wetmore, Lisa Reisinger, Geneewoo Hong, Edward Lin, Sang Jo Kim, Douglas Wetmore

Background and Aims: Ambulatory hip arthroscopies are associated with severe pain requiring opioid analgesia. Novel motor sparing blocks, the pericapsular nerve group (PENG) and lateral femoral cutaneous nerve block (LFCN) have been reported with efficacy in hip surgery. The purpose of this study is to investigate the analgesic benefits of these novel blocks in terms of opioid-sparing and discharge efficiency.

Methods: After obtaining institutional review board approval (IRB # 2020-2031), we retrospectively identified 1559 patients who underwent elective hip arthroscopy at our institution from January 2019 to December 2020. We used propensity scores to match each block group (PENG, PENG/LFCN) to a control group (neuraxial only). The outcomes of interest include post-anesthesia care unit (PACU) mean opioid consumption, maximum NRS pain score, intravenous rescue analgesia and PACU readiness for discharge times.

Results: PENG/LFCN block group required significantly less opioids in the PACU (25.98 ± 13.04 versus 14.58 ± 5.77, p < 0.001) and were discharged earlier (2.72 ± 1.16 hours versus 4.42 ± 1.63 hours, p < 0.001) than the control group. The combined PENG/LFCN group also used less intravenous rescue opioids (0.47 ± 1.8 mg versus 1.44 ± 2.1 mg, p = 0.099) than the control group. The PENG block alone group did not show a significant difference in opioid reduction (21.95 ± 15.83 versus 27.72 ± 15.01, p = 0.108), but was discharged from the PACU earlier (3.62 ± 1.35 versus 45.5 ± 3.2 hours, p = 0.002).

Conclusions: Combined PENG and LFCN block were associated with expedited PACU discharge and a clinically significant reduction in post-operative opioid use.

Kim_2020-2031_original_approval_12.24.2020
Caesarean 24 hours with validated assessments of Breastfeeding self-efficacy (BSES-SF), Hospital Anxiety and Depression Scale (HADS), Edinburgh postpartum depression scale (EPDS), pain catastrophizing scale (PCS), and EQ-5D-3L at day 7. 

**Methods** Post-Caesarean questionnaires were administered to parturients after elective caesarean delivery at KK Hospital in Singapore at (i) 24 hours (OhsQoR-10, HADS, EQ-5D-3L, EPDS, PCS); (ii) 48 hours (ObqsOqR-10, EQ-5D-3L); (iii) 7 days after Caesarean delivery (OhsQoR-10, BSES-SF, EQ-5D-3L, EPDS).

**Results** 158 patients completed the questionnaires between Sep 2022 and Apr 2023. ObsQoR-10 demonstrated significant internal consistency (Cronbach’s alpha=0.89) but only limited test-retest reliability (Pearson’s r=0.26). The ObsQoR-10 score had moderate correlation with EQ-5D-3L global health visual analogue scale (VAS) at post-Caesarean 24 hours (Pearson’s r=0.31) but only weak correlation at 48 hours and 7 days (Pearson’s r=0.28, 0.18 respectively). It had moderate-to-high degree of correlation with PCS subscales on ruminantation (Pearson’s r=0.51), magnification (Pearson’s r=0.43), helplessness (Pearson’s r=0.47) at 24 hours. ObsQoR-10 exhibited moderate correlation with measures of anxiety (Pearson’s r=0.43) and depression (Pearson’s r=0.49) especially at 24 hours as measured by HADS and EPDS (Pearson’s r=0.41) but the degree of correlation decreases at day 7 (Pearson’s r=0.31).

**Conclusions** These results suggest ObsQoR-10 could be used in assessing the QoR in domains of pain catastrophizing-ruminantation, depression, pain, and quality of life in the Asian population especially within the first 24 hours after delivery.

---

**Abstract EP167 Table 1** Peripheral nerve blocks performed and local anaesthetic used

<table>
<thead>
<tr>
<th>Peripheral nerve block</th>
<th>Frequency</th>
<th>Local anaesthetic (LA)</th>
<th>LA volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>No block</td>
<td>22 (01.79%)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Fascia ilaca (unspecified)</td>
<td>25 (24.76%)</td>
<td>Levobupivacaine</td>
<td>20 – 40 ml</td>
</tr>
<tr>
<td>Suprainguinal fascia ilaca</td>
<td>24 (23.76%)</td>
<td>Levobupivacaine</td>
<td>20 – 40 ml</td>
</tr>
<tr>
<td>Femoral nerve</td>
<td>5 (4.95%)</td>
<td>Levobupivacaine</td>
<td>20 ml</td>
</tr>
<tr>
<td>Femoral nerve + lateral cutaneous</td>
<td>11 (10.89%)</td>
<td>Levobupivacaine</td>
<td>20 – 28 ml</td>
</tr>
<tr>
<td>nerve of the thigh</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femoral nerve + fascia ilaca</td>
<td>6 (5.94%)</td>
<td>Levobupivacaine</td>
<td>40 ml</td>
</tr>
</tbody>
</table>

**Conclusions** The Association of Anaesthetists recommend all patients receive a PNB. This target was not met, primarily in those receiving neuraxial anaesthesia. In some PNBs, local anaesthetic volume may have been subtherapeutic. Opiate use in neuraxial blocks is no longer recommended and a maximum dose <2 ml 0.5% bupivacaine advised to minimise adverse effects. These discrepancies between current practice and latest evidence were presented and our local guidelines are now under review. Further education and training in regional anaesthesia will be undertaken.

---

**EP167 NECK OF FEMUR FRACTURES AND REGIONAL ANAESTHESIA: AN AUDIT OF CURRENT MANAGEMENT VERSUS BEST PRACTICE GUIDELINES**

1Peter Daum*, 2Rupert Lees, 3Venkat Duraiwampty, 1Anaesthetics Department, Surrey and Sussex Healthcare NHS Trust, Reigate, UK; 2Anaesthetics Department, Surrey and Sussex Healthcare NHS Trust, London, UK; 3Anaesthetics Department, Surrey and Sussex Healthcare NHS Trust, Redhill, UK

Background and Aims Regional anaesthesia makes a substantial contribution to the care of patients undergoing surgical fixation of neck of femur (NOF) fractures, a group at significantly increased risk of perioperative complications due to their frailty and comorbidities. We reviewed current management at our district general hospital, comparing it to the latest Association of Anaesthetists’ guidelines (2020).

**Methods** Pre-, intra- and post-operative data points were collected prospectively on patients undergoing NOF fixation over a 10-week period.

**Results** 101 patients were included. The study group was found to be elderly (mean age 81y), comorbid (ASA III: 59.6%, ASA IV: 22.0%) and frail (Clinical Frailty Scale ≥4: 80.2%). Peripheral nerve blocks (PNB) were performed in 78.2% of cases and showed wide variation in technique (see table 1). 21.8% of patients did not receive a PNB, 90.9% of whom received a spinal anaesthetic. Regarding spinal anaesthesia, hyperbaric 0.5% bupivacaine was used in 84.6% of cases and isobaric 0.5% bupivacaine in 15.4%, whilst local anaesthetic volume ranged from 1.8 – 2.6 ml. Neuraxial opiates were used in 61.5%.

**Conclusions** The survey was answered by 85.3% of the team (29/34), epidemiological results can be consulted in table 1. From nurse’s perspective, multidisciplinary anaesthesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.

**Methods** The authors designed an anonymous survey, applied to nurses of a mix case ICU (12-beds), from a tertiary Portuguese Hospital. Questions focused on clinical details, pain management and daily routines.

**Results** The survey was answered by 85.3% of the team (29/34), epidemiological results can be consulted in table 1. From nurse’s perspective, multidisciplinary anaesthesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.

**Background and Aims** Multimodal approach to pain in critical patients, using different drugs combined with regional analgesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.

**Methods** The authors designed an anonymous survey, applied to nurses of a mix case ICU (12-beds), from a tertiary Portuguese Hospital. Questions focused on clinical details, pain management and daily routines.

**Results** The survey was answered by 85.3% of the team (29/34), epidemiological results can be consulted in table 1. From nurse’s perspective, multidisciplinary anaesthesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.

**Background and Aims** Multimodal approach to pain in critical patients, using different drugs combined with regional analgesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.

**Methods** The authors designed an anonymous survey, applied to nurses of a mix case ICU (12-beds), from a tertiary Portuguese Hospital. Questions focused on clinical details, pain management and daily routines.

**Results** The survey was answered by 85.3% of the team (29/34), epidemiological results can be consulted in table 1. From nurse’s perspective, multidisciplinary anaesthesia can improve clinical outcomes. This study aims to assess nurse’s perspective regarding this approach, namely pain management outcome and practical aspects regarding epidural analgesia manipulation.