

Hanche - Genou

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Pericapsular nerve group (peng) block place in postoperative analgesia

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Position du problème et objectif(s) de l'étude:

Recent anatomic study on anterior hip capsule sensory innervation led to the identification of relevant landmarks to target the hip articular branches of the femoral nerve and accessory obturator nerve leading to the development of a novel Ultra-Sound guided technique to block these nerves: The PERicapsular Nerve Group Block (PENG). The aim of our study was to compare the Pericapsular nerve group block to the Supra-Inguinal Fascia Iliaca block (SI-FIB) by assessing postoperative pain scores.

Matériel et méthodes:

After approval by the ethics comity we conducted a randomized, prospective double-blinded trial that included elderly patients aged over 65 years who were scheduled for hip fracture surgery. The patients were randomly allocated to receive PENG block using 20 mL of 0.25% bupivacaine or a Supra-Inguinal Fascia Iliaca block using 20 mL of 0.25% bupivacaine. The primary study outcome was pain score at rest at 6 hours postoperatively rated using Numerical Rating Scale (NRS). Secondary outcomes included the time of performance of each block, pain score at 12 and 24 hours postoperatively, morphine consumption in the PACU, and adverse events. Univariate comparisons between the two groups of patients were performed using t-student test, Mann Whitney test, and Pearson's Chi-square test. Statistical significance was defined as $p < 0.05$.

Résultats & Discussion:

89 patients were included in our study, 44 patients received PENG block and 45 patients received SI-FIB. The mean pain score at rest at 6 hours postoperatively was 2.47 ± 0.78 in the SI-FIB group and 2.7 ± 1.39 in the PENG group with no significant statistical difference ($p = 0,767$). We also have not found a significant statistical difference in the pain scores at 12 hours and 24 hours postoperatively ($p = 0.198$, $p = 0.130$ respectively). We also haven't found a difference in the time of performance of each block (4.2 ± 1.42 min SI-FIB group, 4.32 ± 0.98 min PENG group, $p = 0.195$). There was also no significant difference in morphine consumption in the PACU ($p = 0.842$). No adverse reactions were noted in both group.

Conclusion:

PENG block was easy to perform and provided adequate analgesia in the postoperative period with no side effects. However, no superiority was found compared to the SI-FIB.

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