

Pericapsular nerve group block and lateral femoral cutaneous nerve block versus fascia iliaca block for multimodal analgesia after total hip replacement surgery: A retrospective analysis

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Abstract

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Abstract

Background: An effective pain management strategy with minimal muscle weakness is crucial for the prompt start of physical therapy and early hospital discharge. The fascia iliaca compartment block (FICB) is commonly recommended due to its ability to provide substantial pain relief with a minimal risk of causing motor weakness. Alternatively, the pericapsular nerve group (PENG) block combined with the lateral femoral cutaneous nerve (LFCN) block has been suggested as a potentially more effective option. This combination is believed to offer superior pain control with a significantly reduced risk of motor block compared to FICB. Our objective was to compare these two methods to determine which one results in the lowest numeric rating scale (NRS) score for pain.

Methods: We conducted a retrospective analysis of patients who underwent elective total hip arthroplasty. The primary outcome measured was the numeric rating scale (NRS) score for pain at 6, 12, and 24 hours postoperatively. Secondary outcomes included the total amount of opioids consumed, the time until the first PRN (as needed) opioid dose, and the time until the first postoperative ambulation.

Results: 52 patients were recruited, (13 PENG plus LFCN, 39 FICB). PENG plus LFCN resulted in a lower NRS at all three-time points (mean difference and 95%CI at 6 h 0.378 [-0.483; 1.240], at 12 h 0.336 [-0.378; 1.050], and at 24 h 0.464 [0.013; 0.914] $P = 0.02$). Moreover, less PRN opioids were requested in the PENG plus LFCN vs. FICB group (0 [0;7.5] vs 60 [15;80] milligrams of morphine equivalents, $P = 0.001$). No delay in the first ambulation or initiation of physical rehabilitation was reported in either group.

Conclusions: The PENG plus LFCN block appears to provide better pain control and reduce the need for PRN opioids. Neither block interfered with physical therapy or ambulation. These findings should be validated through a larger prospective and randomized study.

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