



ANALGESIC EFFICACY OF PENG BLOCK VERSUS FEMORAL NERVE BLOCK IN ELDERLY PATIENTS WITH HIP FRACTURE: A COMPARATIVE STUDY BASED ON SURGICAL PROCEDURE

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Introduction. Optimizing postoperative pain management in geriatric patients with hip fractures is crucial to reduce the side effects associated with opioid-based analgesic therapy.

Objectives. This study compared the analgesic efficacy of Pericapsular Nerve Group (PENG) block, Femoral Nerve Block (FNB), and a control group (no block) regarding pain intensity, opioid consumption, and Post Operative Delirium (POD) incidence, stratified by surgical procedure.

Materials and Methods. Patients were consecutively recruited in the Orthogeriatric Ward at Ospedale Civile Baggiovara (Jan 1-Sep 30, 2024; N=214; 72.4% female; mean age 84.9±7.7). Cohorts included hemiarthroplasty (HA, n=82) and gamma nail (GN, n=132). Outcomes were Pain measured with the Numerical Rating Scale (NRS), Delirium measured with 4AT, and morphine equivalent consumption on postoperative days (DAY) 1-3.

Results. In the HA group, the PENG group showed significantly lower morphine consumption on DAY 3 compared to

FNB (1.14 vs 4.22 mg; p=0.045). In the GN group, both blocks significantly reduced NRS and morphine consumption on DAY 2 and 3, compared to the control (p<0.05). In DAY 1, FNB showed lower NRS than PENG (2.24 vs 3.41; p=0.022). Delirium Incidence didn't show significant differences between groups. Multivariate analysis confirmed that "Block Type" was a significant independent predictor of reduced morphine consumption on DAY 3 (p=0.006), regardless of surgery type, age, and sex.

Conclusions. Regional anesthesia efficacy varies by surgery type. For gamma nail, both blocks provide superior pain control and opioid sparing, though FNB appears more effective in the immediate postoperative period (DAY 1). For hemiarthroplasty, the PENG block demonstrates a significant late opioid-sparing effect compared to FNB. The independent role of the block in reducing late opioid requirements supports its systematic use in multimodal geriatric analgesia.