

Regional Block Only is Safe and Effective for Surgical Management of Subtrochanteric Fractures: A Feasibility Study

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Purpose: The purpose of this study was to examine the efficacy of the lateral femoral cutaneous and over the hip (LOH) block as the only anesthesia for subtrochanteric femur fracture repair.

Methods: A retrospective review of an Institutional Review Board (IRB)-approved subtrochanteric database from 2012 to 2024 was conducted. Demographics, injury and surgical details, hospital quality measures, complications, readmissions, mortality, and functional outcomes during the index admission were recorded. Patients were divided into three groups (LOH block, neuraxial, and general) according to the anesthetic modality administered during their surgery. A 1:1:1 propensity score match was conducted based on the patients' score for trauma triage in the geriatric and middle-aged population (STTGMA, a validated in-patient mortality risk assessment tool). Statistical comparisons were made using Pearson χ^2 testing and one-way analysis of variance (ANOVA) in SPSS, version 29 (Armonk, NY).

Results: A total of 36 patients with an average age of 76.08 ± 10.85 years was included in the final analysis (12 per group). The groups were similar in age, BMI, comorbidity index, energy of injury, race, pre-injury ambulatory status, OTA fracture classification, and fixation method. There was no difference in coronal alignment ($p = 0.599$) or sagittal alignment ($p = 0.453$) postoperatively. The LOH group had the shortest anesthesia time (14.58 vs 22.92 [neuraxial] vs 28.67 minutes [general], $p = 0.01$) and trended toward the shortest total operating room time (124.58 vs 146.58 vs 169.75 minutes, $p = 0.070$). The general group displayed the longest time to ambulation (3.36 vs 1.42 [neuraxial] vs 1.58 days [LOH], $p = 0.026$) and trended toward shorter ambulation distance upon discharge compared to the LOH group (22.83 vs 126.92 feet, $p = 0.061$). There were no significant differences among groups in anesthesia-related complications, palliative care consults, complication rates, readmission rates, or postoperative mortality.

Conclusion: This study suggests that the regional (LOH block) only approach is a safe and effective anesthetic modality in the context of subtrochanteric fracture repair. The use of a regional anesthesia only does not impede the ability to obtain an acceptable alignment. Additionally, this strategy may impart benefits in earlier postoperative ambulation.