Is Regional-Only Anesthesia a Safe Choice in Anticoagulated Hip Fracture Patients?

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Purpose: Alternative anesthetic strategies are sought due to concern of spinal anesthesia use in acutely anticoagulated, elderly hip fracture patients. This study assessed the safety of the lateral femoral cutaneous and over the hip (LOH) block, a regional anesthetic, in anticoagulated hip fracture patients.

Methods: An IRB-approved study assessed patients diagnosed with OTA type 31A or 31B fractures who presented actively using oral anticoagulants (Coumadin, Apixaban, Clopidogrel, and Xarelto). Patients were grouped based on anesthesia type: LOH block (LOH) vs general anesthesia (GA) and LOH block vs spinal anesthesia (SA). LOH block patients were matched based on anticoagulant type, OTA/AO classification, and risk (Score for Trauma Triage in the Geriatric and Middle-Aged [STTGMA], with a 3:1 ratio to GA and 1:1ratio to SA. Patient demographics, injury characteristics, and surgical history were reviewed and compared. Outcomes included postoperative complications, 90-day readmission rates, mortality within 1 year, and discharge location. Cohorts were compared using independent t-tests, $\chi 2$ tests, and analysis of variance.

Results: A total of 135 patients (81 GA, 27 SA, and 27 LOH) were analyzed. All surgeries were successfully completed with no intraoperative bleeding complications. Comparing GA to LOH, the cohorts were similar in age, sex, race, Charlson Comorbidity Index (CCI), STTGMA, body mass index (BMI), anticoagulant type, baseline ambulatory status, and mechanism of injury. The American Society of Anesthesiologists (ASA) score for patients who underwent GA was higher than the LOH block group (3.12 ± 0.533 vs 2.78 ± 0.641, P = 0.007). GA patients had higher rates of 90-day readmission (19.8% vs 3.7%, P = 0.047). More LOH patients were discharged to home with health services (33.3% vs 8.6%, P = 0.024). The GA population trended toward more major complications (P = 0.077) and mortality within 1 year (P = 0.077). The SA and LOH cohorts were similar in all demographics, fracture patterns, and anticoagulant types. Patients who underwent SA had a normal BMI, while LOH patients were slightly underweight (25.1 ± 4.19 vs 22.7 ± 4.16, P = 0.035). There was a delay to surgery, in days, for SA patients (1.54 ± 1.48 vs 0.89 ± 0.69, P = 0.039). Across all groups, there were no significant differences in other postoperative complications.

Conclusion: The LOH block is effective and safe for use in anticoagulated hip fracture patients. This technique also allows for less delay to surgery when a “non-general” anesthesia method is sought.