

Hip Fracture Patients on Non-Warfarin Anticoagulants: Is Surgical Delay Warranted?

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Purpose: The risk of bleeding in hip fracture patients on anticoagulants, particularly antiplatelet and factor Xa inhibitors, is not well defined. There is still controversy regarding whether operative delay is necessary in elderly hip fracture patients on these medications. The purpose of this study was to analyze surgical and clinical outcomes in hip fracture patients on anticoagulation, comparing those patients who were treated within 48 hours of admission with those whose surgery was delayed past 48 hours.

Methods: Patients with hip fractures treated operatively aged 55 and older at one academic medical center between October 2014 to September 2016 were analyzed. Patients on the following anticoagulants were included: antiplatelet drugs including clopidogrel and aspirin 325 mg, factor Xa inhibitors including rivaroxaban and apixaban, and the direct thrombin inhibitor dabigatran. Patient demographics including age, sex, and Charlson Comorbidity Index (CCI) were collected. Outcome measures included length of stay, transfusion rate, estimated surgical blood loss, procedure time, complication rate, and need for ICU/SDU (intensive care unit/step down unit) level care. Patients who underwent surgery within 48 hours of presentation were compared to those where surgery was delayed more than 48 hours. Outcomes were compared between groups using P value of <0.05 as significant.

Results: Of 551 hip fracture patients, 78 (14.3%) of these were on the anticoagulant medications included in this study. Of these 78 patients, 58 (74.4%) had surgery within 48 hours and 20 (25.6%) had surgery after 48 hours. When comparing the early and delayed fixation cohort, there was no difference in transfusion requirement (1.1 units vs 1.5 units, $P = 0.453$), length of surgery (73.0 minutes vs 74.8 minutes, $P = 0.806$), or blood loss (163.2 mL vs 170.0 mL, $P = 0.727$). Type of anticoagulant made no difference in transfusion requirement, blood loss, or length of surgery. There was also no difference in average number of complications developed or in need for ICU/SDU level care in the early fixation group and delayed fixation group.

Conclusion: In this study, patients on antiplatelet therapy, factor Xa inhibitors, or direct thrombin inhibitors who underwent surgical fixation of their hip fracture within 48 hours of admission were at no higher risk for transfusion, increased surgical blood loss, or longer operative time. This suggests that if otherwise medically optimized for surgery, surgeons should not hesitate in operating on hip fracture patients on these anticoagulant medications within 48 hours.