

“You Have to Wait 48 Hours” or Do We Really? No Difference in Mortality or Complication Rate for Patients on Direct Factor Xa Inhibitors Undergoing Hip Fracture Surgery

John Michael Yingling DO; David Keller DO; Deborah Li BA; John Joseph Feldman MD; Li Sun DO; Frank A Liporace MD; Richard S Yoon MD

Jersey City Medical Center - RWJBarnabas Health, Jersey City, NJ, United States

Purpose: With the advent of factor Xa inhibitors, many patients are no longer relying on warfarin for medical anticoagulation for a myriad of medical conditions. However, due to medication recommendations (waiting 48 hours prior to surgery), this often leads to a delay in operative fixation of their hip fractures, which may lead to further morbidity, mortality, and increased cost of care. This study compares patients with factor Xa inhibitors undergoing hip fracture surgery before the 48-hour and after the 48-hour recommendation in order to identify a difference in mortality or complication rate.

Methods: Institutional hip fracture registry was screened for inclusion over a 2-year period. The patients who had surgery within 48 hours were compared to those who underwent surgery after 48 hours. Type of prophylactic anticoagulation (none, factor Xa inhibitors, low-molecular-weight heparin, heparin, warfarin), time to surgery, length of stay, pre- and postoperative hemoglobin, transfusion requirements intra- and postoperative, complications, reoperation, and mortality at disposition, 30 days, 90 days, and 1 year were all recorded. Statistical analysis was performed using SPSS 20.0, and included χ^2 , and bivariate and multivariate analyses; regression was performed to control for cohort size differences.

Results: 122 patients (41.1%) were taking prophylactic anticoagulation prior to their operative procedure. 86.5% of patients had surgery within 48 hours of injury. Of the 122 patients on prophylactic anticoagulation, 99 (81.1%) had surgery within 48 hours and 23 (18.9%) had surgery after 48 hours. There was no significant difference in complication rate or mortality at 30 days ($P = 0.05$), 90 days ($P = 0.10$), or 1 year ($P = 0.05$) of the patients on anticoagulation who received surgery within 48 hours compared to those outside of 48 hours.

Conclusion: Elderly patients who sustain hip fractures on prophylactic anticoagulation including oral factor Xa inhibitors have no increased risk in mortality at 30 days, 90 days, and 1 year when their surgery is performed within 48 hours of arrival. Our study suggests that operative fixation of hip fractures in patients on prophylactic anticoagulation should not be delayed for correction of anticoagulation effects of these medications and should occur within 48 hours of admission.