Timing of Direct Oral Anticoagulant Usage Does Not Negatively Impact Outcomes Following Hip Arthroplasty for Femoral Neck Fractures

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INTRODUCTION:
Orthopedic surgeons routinely delay surgical management of femoral neck fractures for 36-48 hours in patients taking direct acting oral anticoagulants (DOACs). This study assessed if there was a higher risk for complications in patients who underwent early surgery (within 24 hours after DOAC administration) compared to patients with delayed surgery or no preceding DOAC usage.
METHODS:
A multi-center, retrospective cohort study was conducted on 2,833 patients who underwent primary total hip arthroplasty (THA) or hemiarthroplasty (HA) for femoral neck fracture between 12/31/2017-1/29/2024. Exclusion criteria included internal fixation, a diagnosis of periprosthetic fracture (revision arthroplasty), and patient age < 18 years. Mortality, readmission, blood transfusion, discharge disposition, hospital length of stay (LOS), and medical complications were compared between groups. Subgroup analysis was performed to stratify outcomes by number of days a DOAC was held prior to surgery. Chi-square and Student's T-test were performed for statistical analysis.
RESULTS:
A total of 207 patients (7%) took a DOAC prior to surgery. The DOAC group was older and more likely to be male (84 years; 53% women) compared to the control group (81 years; 65% women) (p=0.002). DOAC patients were more likely to receive a postoperative blood transfusion compared to controls (16% vs. 9%, p=0.005) despite having similar pre-operative hemoglobin levels (12.3 g/dL vs. 12.6 g/dL; p=0.079) and clinically comparable absolute drop in postoperative hemoglobin (-2.0 g/dL vs. -2.1 g/dL, p=0.05). Operative time was faster in the DOAC patients (101 minutes vs. 108 minutes, p=0.028). Subgroup analysis demonstrated early surgery (within 24 hours of DOAC) had a comparable hospital LOS to control patients (6.0 days vs. 5.8 days), which was shorter than the delayed DOAC groups (7.0 days and 7.7 days) (p=0.005). There was no difference in mortality, reoperation, medical complications, or discharge disposition between early and late DOAC groups and control patients (all p>0.05).
DISCUSSION AND CONCLUSION:
Delayed surgical management for DOAC medications may be unnecessary in patients undergoing arthroplasty due to femoral neck fractures. Consideration should be given to adjusting transfusion triggers to reduce the blood transfusion risk in DOAC patients.