Lower Rates of Transfusion with Aspirin Compared to Low-Molecular-Weight Heparin Following Revision Total Hip Arthroplasty for Periprosthetic Joint Infection

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INTRODUCTION:
Balancing the risk of bleeding complications and venous thromboembolic (VTE) events remains a major challenge when choosing the optimal chemoprophylactic agent following revision total hip arthroplasty (THA). This study assessed the safety and efficacy of ASA in a cohort of patients undergoing first stage revision surgery for the management of periprosthetic joint infection (PJI) of the hip.
METHODS: The national database was screened for all patients undergoing revision arthroplasty for PJI using spacer and antibiotic chargers to validate accuracy of the patients included. Patients who received ASA were compared to patients who received LMWH. Patients with a history of VTE and those taking other prophylactic agents were excluded. Propensity score matching was used to balance cohorts. To account for residual confounding, multivariable logistic regression models were then used to assess our primary outcomes of VTE and postoperative transfusion.
RESULTS: 5,272 patients were matched 1:1 based on VTE prophylaxis type. Both cohorts were 65 years old on average. The average Charlson comorbidity index was similar for both cohorts (3.0 vs. 3.1, p=0.24). The ASA group had a lower rate of tranexamic acid (26.7% vs. 29.2%, p=0.03) utilization. ASA patients had equivalent rates of VTE (1.48% vs. 1.48%, p=1.000 [deep vein thrombosis: 1.14% vs. 1.14%, pulmonary embolism 0.38% vs. 0.42%]; adjusted odds ratio [aOR]=1.19, 95% confidence interval [CI]=0.72-1.95). Postoperative transfusion rates were significantly lower in the ASA cohort (11.8% vs 16.7%, p<0.001; aOR=0.62, 95% CI=0.52-0.75).
DISCUSSION AND CONCLUSION: In patients undergoing revision THA for PJI, ASA chemoprophylaxis was associated with equivalent rates of VTE but significantly lower postoperative transfusion requirements compared to LMWH, even after adjusting for potential confounding factors.