Bleeding Disorders Are Not a Contraindication to Aspirin Prophylaxis in Patients Undergoing Primary Total Knee Arthroplasty

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INTRODUCTION: Aspirin has emerged as the agent of choice for venous thromboembolism (VTE) prevention in patients undergoing primary total knee arthroplasty (TKA). Notwithstanding, the efficacy of aspirin as a mode of chemoprophylaxis in patients with bleeding disorders has not been examined to date. The purpose of this study was to determine the efficacy of aspirin versus other anticoagulant medications in primary TKA patients who have a bleeding disorder.

METHODS: This study utilized a national database to identify patients who underwent primary TKA. Only patients with a diagnosis code for a bleeding disorder prior to their primary TKA were included. Using demographic data, medical comorbidities, and preoperative anticoagulation use, primary TKA patients with a bleeding disorder who were prescribed aspirin for thromboprophylaxis (n=2,235) were propensity score matched on a 1:1 basis to those that were on non-aspirin medications (n=2,235). The odds ratios (OR) for developing 90-day medical and surgical complications were determined for patients prescribed aspirin only, when compared to those prescribed other types of chemoprophylaxis.

RESULTS: 4,470 matched patients with a bleeding disorder undergoing primary TKA were included. Patients in the aspirin group had significantly lower odds of developing deep vein thrombosis (DVT) (1.3% vs. 2.6%; OR 0.48 [0.3 to 0.8], p=0.002), requiring a blood transfusion (1.3% vs. 2.3%; OR 0.56 [0.4 to 0.9], p=0.018), or experiencing a readmission following their procedure (4.9% vs. 7.2%; OR 0.66 [0.5 to 0.8], p=0.001), when compared to their counterparts in the non-aspirin group. However, there was no difference in the odds of developing pulmonary embolism (PE) (0.1% vs. 0.3%; OR 0.29 [0.1 to 1.4], p=0.180) between the two groups.

DISCUSSION AND CONCLUSION: The findings of our study suggest that aspirin may is a safe and effective method of VTE prophylaxis in patients with bleeding disorders that are undergoing primary TKA.