Routine Aspirin for Venous Thromboembolism Chemoprophylaxis After Primary Total Ankle Arthroplasty

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INTRODUCTION: Aspirin for postoperative venous thromboembolism (VTE) chemoprophylaxis is well-validated in adult reconstruction surgery. For total ankle arthroplasty (TAA) low-molecular-weight heparin is a predominant agent despite little evidence. The purpose of this study was to evaluate outcomes of patients undergoing primary TAA at a single institution, in relation to routine postoperative aspirin administration for VTE chemoprophylaxis.

METHODS: Patients who underwent primary TAA at a single institution by two fellowship-trained foot and ankle surgeons were prospectively telephoned and retrospectively reviewed. All patients were prescribed oral aspirin 81 mg BID for minimum 2 weeks postoperatively, (or while restricted weight-bearing). The primary outcome was presence of deep vein thrombosis (DVT), pulmonary embolism (PE), or VTE-related mortality within 3 months postoperatively. Secondary outcome was presence of aspirin adverse effects i.e. delayed wound healing or gastrointestinal (GI) bleeding. Patients with bleeding disorder or VTE histories, pre-existing non-Aspirin anticoagulation, and revision TAA or concomitant bony osteotomy surgeries were excluded.

RESULTS: There were 217 included patients, with 81patients available by telephone. The cohort had 119 males (54.8%) with mean age 62.6 +/- 10.3 years. No GI bleed or VTE events were found, but there were 46/217 (21.2%) cases of delayed wound healing. Eleven patients had venous ultrasounds, which were negative. Sex, age, and BMI were not associated with delayed wound healing, but smoking history trended toward significance (p=0.077). Time-to-weight-bearing (TTWB) was bimodal, with most patients bearing weight between 1.5-3.5 weeks (37.8%) or 5.5-7.5 weeks (45.1%). TTWB trended toward association with delayed wound healing (p=0.05), likely representing intervention to protect surgical wounds.

DISCUSSION AND CONCLUSION:

This study demonstrates effective aspirin use in preventing VTE events after primary TAA. Future randomized controlled studies should assess any role of aspirin with regards to delayed wound healing. Major limitation of the study includes lack of a control group.