

The Effect of Tranexamic Acid Use on Wound Healing Complications After Hemiarthroplasty

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Purpose: Tranexamic acid (TXA) has been shown to decrease blood loss in orthopaedic trauma surgery and potentially decrease wound complications in total elbow arthroplasty. However, its effect on postoperative wound complications after orthopaedic trauma surgery, in general, has not been investigated. Therefore, the purpose of this study was to investigate postsurgical wound complications in patients with and without preoperative use of TXA who underwent hip hemiarthroplasty for femoral neck fractures via a formal open approach.

Methods: A retrospective chart review was performed on patients who had presented to a large midwestern Level-I trauma center over a 5-year period between January 2014 and 2019. The primary outcome was surgeon-reported wound complications within 90 days of surgery, including surgical site infection, hematoma, seroma, wound-related reoperation, and wound-related antibiotic use. A χ^2 test was performed to assess for any difference in wound complications between those who received TXA preoperatively, and those who did not.

Results: In total, 310 patients met inclusion criteria; the average age was 79.5 years. Of these, 138 received TXA preoperatively, and 172 did not. Of the patients receiving TXA, 21 (15.2%) had a postsurgical complication. Of the patients who did not receive TXA, 12 (7.0%) had a complication. The P value was measured at 0.019 with a statistically significant increase in wound complications among those receiving TXA. Subgroup analysis revealed a significantly higher percentage of current smokers in the TXA group. However, when controlling for current smokers, individuals who received TXA were still 2.4 times more likely to have a wound complication than those who did not (odds ratio: 2.4; 95% confidence interval: 1.1, 5.2; P = 0.023).

Conclusion: TXA has become a commonly used medication preoperatively in orthopaedic trauma surgery secondary to a substantial body of literature indicating a reduced risk of transfusion and decrease blood loss without any increased risk of symptomatic thrombotic events. Contradictory to logic, however, the current retrospective study suggests that TXA use may be related to an increased risk of surgeon-reported wound complications after hip hemiarthroplasty.