Tranexamic Acid Associated with Less Wound Complications in Ankle and Hindfoot Surgery
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\textbf{INTRODUCTION:} Tranexamic acid (TXA) is a popular antifibrinolytic therapy used to decrease bleeding. We hypothesized that total ankle arthroplasty (TAA) and hindfoot fusion patients receiving TXA would exhibit fewer wound complications.

\textbf{METHODS:} We retrospectively reviewed 212 patients (217 feet) undergoing TAA (n=72), ankle or hindfoot fusion (i.e., subtalar=47, ankle=36, double=33, tibiotalocalcaneal=20, triple=8, and pantalar=1) between 2015 and 2020 by a fellowship-trained foot and ankle surgeon at an academic medical center. Patient demographics, medical history, complications, and union status (for fusions) were compared between TXA (n=101) and non-TXA (n=116) cohorts. Mean follow up was 1.24 years (range, 0.25-4.68).

\textbf{RESULTS:} The TXA group had significantly less postoperative infections requiring oral antibiotics (5.9\% vs. 15.5\%, \(p=.025\)), with a trend toward less superficial (\(p=.140\)) and deep infections requiring reoperation (\(p=.125\)). (\textbf{Table 1}) Subgroup analysis of hindfoot fusions (n=145) revealed significantly shorter time to fusion (146 vs. 202 days, \(p=.049\)), fewer reoperations (8.6\% vs. 21.8\%, \(p=.036\)), shorter follow up (0.96 vs. 1.30 years, \(p=.030\)), and fewer active smokers (5.2\% vs. 16.1\%, \(p=.045\)) within the TXA group, but significantly more patients with Charcot neuroarthropathy (20.7\% vs. 5.7\%, \(p=.006\)). Subgroup analysis of TAA s showed fewer cases of superficial infections (2.3\% vs. 27.6\%, \(p=.002\)) and delayed wound healing (25.6\% vs. 48.3\%, \(p=.047\)) in the TXA cohort.

\textbf{DISCUSSION AND CONCLUSION:} TXA use in hindfoot surgery was correlated with a reduction in superficial infections and shorter radiographic time to union on X-ray. The use of TXA in TAA correlated with fewer superficial infections and decreased rates of delayed wound healing. TXA has shown to be beneficial in other areas of orthopaedics and appears to also be beneficial in hindfoot and ankle surgery, though further research is needed to confirm these findings.

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 & TXA & No-TXA & \textit{p}-Value \\
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Follow-up Duration (years) & 1.11 & 1.35 & .068 \\
Infection (\%) & 5.9 & 15.5 & .025* \\
Delayed Wound Healing (\%) & 19.8 & 24.1 & .443 \\
Readmission (\%) & 2.0 & 6.0 & .180 \\
DVT/PE (\%) & 1.0 & 0.0 & .465 \\
Amputation (\%) & 1.0 & 0.0 & .465 \\
Reoperation (\%) & 9.9 & 19.0 & .060 \\
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\caption{Postoperative outcomes between cohorts.}
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