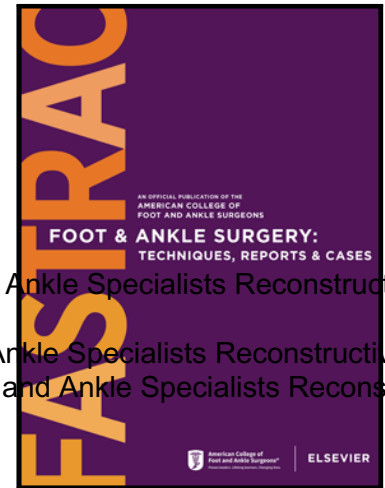


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The Utility of Tranexamic Acid in Foot & Ankle Surgery: A Systematic Review with Meta-Analysis

Charlene Dennemeyer DPMAACFAS Fellow; Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle
Hans Humrick DPM Chief Resident ,
Paul Klutts DPMFACFAS Program Director; Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle
Amanda Denzik DPMFACFAS Assistant Director; Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle

PII: S2667-3967(23)00013-7
DOI: <https://doi.org/10.1016/j.fastrc.2023.100275>
Reference: FASTRC 100275



To appear in: *Foot & Ankle Surgery: Techniques, Reports & Cases*

Received date: 28 February 2023
Accepted date: 2 March 2023

Please cite this article as: Charlene Dennemeyer DPMAACFAS Fellow; Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle
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The Utility of Tranexamic Acid in Foot & Ankle Surgery: A Systematic Review with Meta-Analysis, *Foot & Ankle Surgery: Techniques, Reports & Cases* (2023), doi: <https://doi.org/10.1016/j.fastrc.2023.100275>

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ACFAS Annual Scientific Conference Poster Award Recipient

The Utility of Tranexamic Acid in Foot & Ankle Surgery: A Systematic Review with Meta-Analysis

Charlene Dennemeyer, DPM, AACFAS^{1,#,a,*}

Hans Humrick, DPM^{2,b}

Paul Klutts, DPM, FACFAS^{3a}

Amanda Denzik, DPM, FACFAS^{4a}

^aKentucky/Indiana Foot and Ankle Specialists, 7397 Jefferson Boulevard, Louisville, KY 40219

^b1801 16th St, Greeley, CO 80631

* **Corresponding author:** Charlene Dennemeyer, DPM, AACFAS, Email:

Denneme3@gmail.com

Present address: Kentucky/Indiana Foot and Ankle Specialists

7397 Jefferson Boulevard

Louisville, KY 40219

¹Fellow, Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle Fellowship

²Chief Resident, North Colorado Medical Center PMSR

³Program Director, Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle Fellowship

⁴Assistant Director, Kentucky/Indiana Foot and Ankle Specialists Reconstructive Foot and Ankle Fellowship

Abstract

Tranexamic acid (TXA) is a synthetic antifibrinolytic agent. Literature has been published on the benefits and safety of TXA use in various surgical specialties. Recently, TXA use in foot and ankle surgery has increased in popularity, most notably in trauma, rearfoot reconstruction, and ankle surgery.

A systematic review under PRISMA guidelines was conducted for the following keywords: foot, ankle, surgery, tranexamic acid. Studies with at least one of the following outcomes were included: complications, perioperative blood loss, changes in Hgb and Hct, wound complications, infection, VTE rates. Case studies, studies with <40 participants, review articles, and duplicates were excluded. 9 publications met inclusion criteria for meta-analysis. 992 procedures were included. 607 (61%) received TXA, 385 (39%) did not. Wound complications, blood loss (0-72 hrs), Δ Hct, Δ Hgb, and infections were significantly decreased with TXA. VTE with TXA was slightly increased versus no TXA group, although not significant. No major adverse reactions to TXA were reported. TXA use in foot and ankle elective, reconstructive, and trauma surgery appears to have low risk of patient harm while reducing risks of wound complications, infections, and blood loss. No significant increase of VTE is seen in the available literature. TXA may be beneficial in foot and ankle surgery, particularly in high-risk patients where blood loss is a concern. There is evidence for positive outcomes with little risk of adverse events in both elective and traumatic foot and ankle surgery. However, additional high level studies including a standardized route and dose of administration requires further examination.

Keywords: foot; ankle; surgery; tranexamic acid

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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