ARTICLE INFO

Keywords:
Foot
Ankle
Surgery
Tranexamic acid

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), ΔHct, ΔHgb, 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.

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.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.fastrc.2023.100275.

*Corresponding author.
E-mail address: denneme3@gmail.com (C. Dennemeyer).

https://doi.org/10.1016/j.fastrc.2023.100275
Received 28 February 2023; Accepted 2 March 2023

2667-3967/