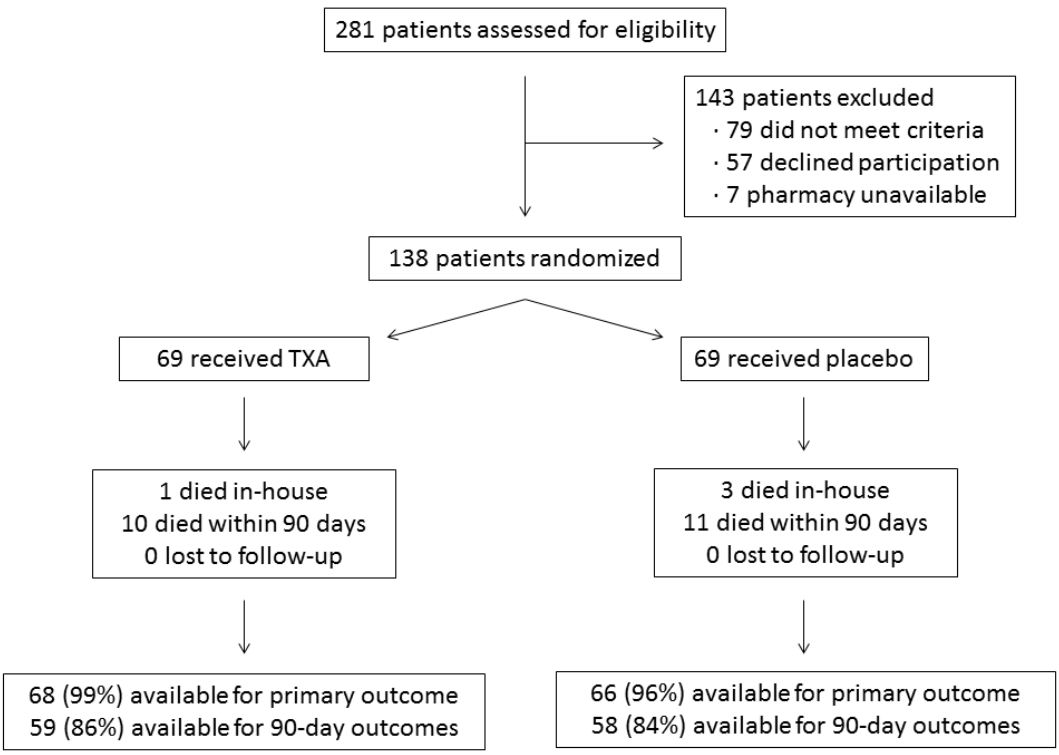
Tranexamic Acid Safely Reduced Blood Loss in Hip Arthroplasty for Acute Femoral Neck Fracture

Chad Watts, MD; Matthew Houdek, MD; ***Stephen Sems, MD****; William Cross, MD; Mark Pagnano, MD*
Mayo Clinic, Rochester, Minnesota, USA

Purpose: Tranexamic acid (TXA) has been shown to limit blood loss and transfusion in elective primary total hip arthroplasty (THA), but there are limited data on its use in patients undergoing arthroplasty for femoral neck fracture (AO 31B). We aimed to determine (1) does TXA reduce calculated blood loss, (2) does TXA reduce the incidence of allogenic blood transfusion, and (3) are there any observable differences in 30- and 90-day complications with TXA administration?

Methods: We performed a prospective, double-blinded, randomized controlled trial wherein 138 patients were randomized to receive either TXA or placebo at the time of surgery. Follow-up was available for all patients through at least 90 days, unless death came earlier. Data collected included calculated blood loss, proportion of patients transfused, number of units transfused, hospital readmission, and 30- and 90-day complications including thromboembolic event, wound complication, reoperation, and mortality.



See pages 49 - 106 for financial disclosure information.

Results: TXA reduced mean calculated blood loss by 305 mL (P = 0.0005). Fewer patients received transfusions in the TXA group (17%) when compared to the placebo group (26%), but this was not statistically significant (P = 0.22). TXA was safe with no differences in adverse events at 30 and 90 days.

Conclusion: This randomized clinical trial found that TXA administration was safe and effective in reducing blood loss, but did not show a significant difference in transfusion for patients undergoing hip arthroplasty for acute femoral neck fracture. More studies are needed to further ascertain the role of TXA in the management of patients with femoral neck fracture.