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Tranexamic Acid Decreases Perioperative Blood Loss From Femoral Fracture Treatment Using the SIGN Nail: Experience on 54 Patients by a Low-Resource Trauma Care Facility

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Purpose: Although some papers have demonstrated a role for tranexamic acid (TXA) in reducing perioperative blood loss in hip fracture surgeries, studies on the use of TXA in orthopaedic trauma are lacking. We aimed to investigate the efficacy of TXA in reducing perioperative blood loss following femoral fracture treatment using the SIGN nail.

Methods: A total of 54 patients with isolated closed unilateral femoral fractures treated by open reduction using the SIGN nail from 1 January 2017 to 31 December 2019 were included. We analyzed patients according to whether one received 1 g of intravenous TXA during surgery, and compared mean intraoperative blood loss and volume of packed red blood cells (PRBCs) transfused, as well as hemoglobin drop, calculated by subtracting the first postoperative hemoglobin determination from the preoperative hemoglobin determination, of the 2 groups.

Results: The TXA group had significantly less volume of PRBCs transfused (250 ± 177 mL vs 340 ± 142 mL, $P = 0.047$), intraoperative blood loss (707 ± 184 mL vs 861 ± 327 mL, $P = 0.034$), and hemoglobin drop (19 ± 8 mg/dL vs 27 ± 14 mg/dL, $P = 0.015$) than the non-TXA group.

Conclusion: The authors conclude there is a role for TXA in decreasing perioperative blood loss when performing open reduction in the treatment of femoral diaphyseal fractures using the SIGN nail.

PAPER ABSTRACTS



Figure 1. The photo shows the SIGN instrumentation system.

The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device they wish to use in clinical practice.