

# Anti-bleeding drug is safe for 'high-risk' patients undergoing hip fracture surgery

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Tranexamic acid (TXA)—a medication given to reduce the risk of bleeding during some orthopedic surgical procedures—can be safely used in patients with intertrochanteric (IT) hip fractures who are at high

risk of blood clot-related complications, reports a study in *The Journal of Bone & Joint Surgery*.

"In this propensity-matched study of high-risk patients receiving TXA during surgical repair of IT fractures, we found no evidence of increased mortality risk or other serious adverse outcomes," according to the new report by Steven B. Porter, MD, and colleagues of Mayo Clinic.

## **No increase in complications with TXA for IT fracture surgery—even in high-risk patients**

IT fractures are a common type of hip fracture that are often caused by falls in older adults. Treatment typically consists of open reduction and internal fixation.

In an [aging population](#), many patients with IT fractures have health problems that place them at a higher risk of blood clot-related (thromboembolic) complications, including [deep vein thrombosis](#) (DVT), pulmonary embolism (PE), stroke, or myocardial infarction. These patients often take anticoagulant drugs to prevent clot formation.

In contrast, TXA reduces the risk of bleeding by promoting blood clotting. Current guidelines for elective total joint replacement surgery recommend the use of TXA to reduce bleeding and transfusion requirements. Although TXA has also been shown to be safe and effective during IT fracture surgery, most previous studies have excluded patients with risk factors for blood clot-related complications. The researchers cite the "concerning" lack of data on the safety of TXA in this growing group of high-risk patients.

Dr. Porter and colleagues analyzed data for 1,147 patients who underwent IT surgery in their health-care system between 2015 and

2019. The patients were elderly, with an average age of 81.5 years. About half of patients had conditions such as atrial fibrillation, clotting abnormalities, or previous stroke, DVT, or PE that could increase the risk of blood clot-related complications.

The researchers compared the risks of serious complications and death after IT surgery for patients who did and did not receive TXA. The study included separate analyses of 564 high-risk patients as well as the entire population of 1,147 patients, with adjustment for the likelihood of adverse outcomes (based on propensity score).

The results showed no association between TXA administration and the risk of death, DVT, PE, myocardial infarction, or stroke in either analysis.

Although not designed to evaluate the effectiveness of TXA, the study also showed a three-percent decrease in the risk of blood transfusion among both high-risk and low-risk patients receiving TXA. However, the difference was not significant. The researchers also emphasize that their health-care system followed the TXA dose recommended in current guidelines for total joint replacement surgery.

Dr. Porter and colleagues note that their study—which included a large number of high-risk patients—is consistent with previous research showing that TXA is safe for patients undergoing IT fracture surgery. The authors conclude that "this study provides support for TXA administration's safety profile for all [patients](#) presenting for surgical repair of IT fractures."

**More information:** Porter, Steven B. et al, Tranexamic Acid Was Not Associated with Increased Complications in High-Risk Patients with Intertrochanteric Fracture, *The Journal of Bone and Joint Surgery* (2022). [DOI: 10.2106/JBJS.21.01389](https://doi.org/10.2106/JBJS.21.01389)

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