

# ***Benefits Of Using Tranexamic Acid In Spinal Deformity Surgery.***

*A thesis submitted for partial fulfillment of the requirements for  
the MSc degree in Neurosurgery.*

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# Summary

- Spinal deformity surgery has the potential for massive blood loss, especially during long level lumbar or thoracic instrumented fusion with or without osteotomy, blood loss may be substantial and transfusion is required in most cases .
- Therefore, there have been many options in blood conservation strategies to reduce surgical bleeding and intraoperative allogeneic blood transfusions.
- Recently, the use of antifibrinolytics has become popular in major spinal surgeries.
- In the present study, we found the use of TXA was effective in reducing surgical bleeding , and postoperative transfusion volume for patients undergoing spinal deformity surgeries. Also, there was a tendency toward lower postoperative transfusion rate and less postoperative drain amount in TXA group, although the differences did not reach statistical significance. These results were concordant with the majority of previous studies and recently published meta-analysis.
- Most studies showed tendency toward less postoperative bleeding in TXA group with or without statistical significance . Present study also demonstrated less postoperative drain amount in TXA group without reaching statistical significance..

- Another issue with the use of TXA is about safety concerns. The primary concern with the use of TXA is the potential for an increased risk of thromboembolic complications such as peri-operative myocardial infarction, stroke, deep vein thrombosis, and pulmonary embolism. Also, there have been reports that use of high-dose TXA resulted in seizure in patients undergoing cardiac surgery . However, there has been no case reporting seizure associated with TXA use in patients having spine surgery, and recent literatures including meta-analysis demonstrated that TXA was not associated with increased incidence of such thromboembolic complications as this study assures .
- The present study also showed TXA hasnot done any complications in studied cases.
- In the present study, we found the use of TXA was effective in reducing surgical bleeding , and postoperative transfusion volume for patients undergoing spinal deformity surgeries. Also, there was a tendency toward lower postoperative transfusion rate and less postoperative drain amount ,early hospital discharge in TXA group, although the differences did not reach statistical significance .