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OPEN PEER REVIEW

Comparative Study of the Effects of Local Tranexamic Acid (TXA) and Placebo in Reducing Bleeding in Patients Undergoing TURP Surgery

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

4 comments · 28 Nov 2025 – 10 Dec 2025

Referee 1 Reviewer

MINOR REVISION 28 Nov 2025

1- The text does not explain why the study is still needed, what exactly the weaknesses of the previous studies were, or why the use of TXA in the irrigation fluid is still questionable.
2- Incomplete explanation of the bleeding mechanism and the role of TXA
Why does TURP cause bleeding?
What pathways are involved in bleeding? (coagulation vs. fibrinolysis)
Which pathway exactly does TXA target, and why should it be effective?
However, the mechanisms are explained very superficially.
3- "Patients aged 18 years or older" is an unrealistic and unscientific criterion for TURP; TURP is actually performed in patients over the age of 50.
4- The phrase "without systemic comorbidities" is unrealistic and vague; elderly patients usually have at least one underlying disease.
5- The exact randomization method is not explained (simple? block? stratified?).
6- The text uses mg/dL for hemoglobin twice; this unit is completely wrong.
Hb is always expressed in g/dL.
7- Overstated and incorrect conclusion about the "independent effect of TXA"
The text states:
"Correlation analyses suggest that the effect of TXA is independent of baseline characteristics…"
However, the correlation results cannot prove the "independent effect."
To prove the independent effect,
multiple regression,
ANCOVA,
or adjustment models
should be used, which was not done.
So this conclusion is wrong and impermissible.

Referee 2 Reviewer

MINOR REVISION 1 Dec 2025

Dear Ae,
The topic—local tranexamic acid (TXA) to reduce bleeding during TURP—is clinically relevant and aligned with urologic and perioperative practice needs.
However, the manuscript has major methodological, statistical, and reporting deficiencies, and the quality of scientific writing needs revision.
Before acceptance, the authors should substantially revise the manuscript.
1-In the Results section, intraoperative blood loss is reported as higher in Group 1 than in Group 2 (158 vs 65 mL), but earlier text states that the TXA group had less bleeding.
2-Reporting Hb in mg/dL is incorrect; it must be reported in g/dL.
3-The authors must explain:
*How was intraoperative bleeding measured?

*Visual estimation?
4-Prostate sizes vary widely (SD ≈ 28 mL). Consider stratifying.

5-The manuscript occasionally repeats background information unnecessarily.

Associate Editor

MAJOR REVISION 8 Dec 2025

Dear EIC,
Thanks to the authors and appreciation to the researchers. The manuscript presents valuable research, but some revisions are needed. The authors should revise it based on the reviewers' comments.

Editor-in-Chief

MAJOR REVISION 10 Dec 2025

Major Revision

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Reviewer(s),

We would like to sincerely thank you for your thoughtful and constructive comments regarding our manuscript entitled “Effect of Topical Tranexamic Acid on Perioperative Bleeding During TURP”. Your detailed review has greatly helped us improve the clarity, scientific rigor, and presentation of our study.

We have carefully addressed all the points raised, and the manuscript has been revised accordingly. Below, we provide point-by-point responses to each comment, highlighting the changes made in the revised manuscript. All modifications are clearly indicated in the text using bold font for easier reference.

We hope that the revisions meet your expectations, and we appreciate your consideration of our manuscript for publication.

1- The text does not explain why the study is still needed, what exactly the previous studies were weak about, or why the use of TXA in the irrigation fluid is still questionable. We have clarified in the Introduction that while systemic TXA has proven efficacy, its topical use via irrigation fluid during TURP remains controversial, with limited and inconsistent evidence. The study addresses this research gap by evaluating the effect of topical TXA on intraoperative and postoperative bleeding.
2- Incomplete explanation of the bleeding mechanism and the role of TXA
Why does TURP cause bleeding? What pathways are involved in bleeding? (coagulation vs fibrinolysis)
Which pathway exactly does TXA target, and why should it be effective?
But the mechanisms are explained very superficially. We expanded the Introduction and Discussion to explain that TURP-related bleeding results from vascular injury and activation of local fibrinolysis via urokinase release. TXA inhibits fibrinolysis by blocking plasminogen binding to fibrin, stabilizing clots and reducing blood loss.
3-“Patients aged 18 years or older” for TURP is unrealistic and unscientific; TURP is actually performed over the age of 50. We revised the inclusion criteria to patients aged ≥50 years, reflecting the typical clinical population undergoing TURP.
4- The phrase “without systemic comorbidities” is unrealistic and vague; elderly patients usually have at least one underlying disease. We clarified that patients with stable and controlled systemic diseases were included, excluding only those with severe uncontrolled conditions, coagulation disorders, or thromboembolic history.
5- The exact randomization method is not explained (simple? block? stratified?). We specified in the Methods that simple randomization using a computer-generated sequence was employed.
6- The text uses mg/dL for hemoglobin twice; this unit is completely wrong.
Hb is always g/dL. All hemoglobin units have been corrected to g/dL throughout the manuscript.
7- Excessive and incorrect conclusion about the “independent effect of TXA”
The text states:
“Correlation analyses suggest that the effect of TXA is independent of baseline characteristics…”
But the correlation results cannot prove the “independent effect.”
To prove the independent effect,
multiple regression
ANCOVA
or adjustment models

should be used, which was not done.
So this conclusion is wrong and impermissible. We revised the Results, Discussion, and Conclusion. Correlation analyses are now reported only as associations. We clearly state that correlation does not prove causality or independence. Future studies using adjusted models are recommended.
Reviewer 1:

Intraoperative blood loss inconsistency (158 vs 65 mL).
The Results section has been corrected. The TXA group (Group 2) had lower intraoperative blood loss (65.07 ± 14.80 mL) compared with the placebo group (158.23 ± 32 mL). All numbers are now consistent throughout the manuscript.

Hemoglobin units incorrect (mg/dL).
All hemoglobin values have been corrected to g/dL throughout the text, tables, and figures.

How was intraoperative bleeding measured?
We clarified in the Methods that intraoperative blood loss was estimated by measuring the hemoglobin concentration in the irrigation fluid, rather than by visual estimation.

Prostate sizes vary widely (SD ≈ 28 mL). Consider stratifying.
We acknowledge the wide variation in prostate volume and have reported correlation analyses between prostate volume and bleeding parameters. Stratification was not performed due to the sample size, but this is noted as a limitation in the Discussion.

Repetition of background information.
Background information has been streamlined to remove unnecessary repetition while retaining all references and context.

2 Revision 1

3 comments · 21 Dec 2025 – 2 Jan 2026

Referee 2 Reviewer

ACCEPT 21 Dec 2025

Dear AE,
I reviewed the revised version of manuscript ID 167956. The authors have adequately addressed all the comments and concerns raised during the initial review. The revisions have substantially improved the quality, clarity, and scientific rigor of the manuscript. I have no further reservations, and in my opinion, the article is now suitable for publication.

Associate Editor

ACCEPT 30 Dec 2025

Dear EIC,
I reviewed the manuscript again. The great effort made to improve the manuscript is highly appreciated.
The authors have addressed all comments.
Thank you

Editor-in-Chief

ACCEPT 2 Jan 2026

Accept