ED GUIDELINE

Post-Tonsillectomy Hemorrhage

Age < 25 years

Children's MINNESOTA

Aim: Reduce the need for acute OR management in patients with post-tonsillectomy hemorrhage.

Patient who is s/p tonsillectomy and presents with bleeding within past 3 hours?

Yes → Bleeding within past hour and/or bleeding > 2 Tbsp (30 mL)?

Yes → Actively bleeding at time of evaluation and/or estimated total bleeding > 1 cup (250 mL)?

Yes → **Resuscitative management**

No → Off pathway

No → **Urgent Management**

No → **Emergent Management**

Exclusion criteria
- Known bleeding diathesis (consult Hematology ASAP)
- Pulsatile bleeding (consult ENT STAT)

Urgent Management
- NPO
- Alert ENT PRN
- Quantify bleeding loss
- IV and labs PRN
- Ondansetron PRN
- Consider tranexamic acid nebulization (Note 2)

Emergent Management
- Place patient in high acuity room
- NPO
- Alert ENT on call (Note 1) early in care
- Quantify bleeding loss
- IV access x 1
- 20ml/kg IV NS or LR, more PRN
- Ondansetron
- Labs: CBC, Type and Screen, PT,PTT, fibrinogen, Von Willebrand screen, Platelet function assay
- See transfusion criteria (Note 3)
- Give Tranexamic acid Neb (Note 2)
- Consider Tranexamic IV

Resuscitative management
- Place in resuscitation room
- NPO
- Alert ENT on call (Note 1) immediately
- Have patient sit up, lean forward, quantify bleeding loss
- Apply direct pressure to brisk bleeding
- IV access x 2
- 20ml/kg IV NS or LR, more PRN
- Ondansetron
- Labs: CBC, Type and Screen, PT,PTT, fibrinogen, Von Willebrand screen, Platelet function assay
- See transfusion criteria (Note 3)
- Give Tranexamic Acid Neb AND IV (Note 2)

Note 1. On Call ENT

Contact the originating surgeon/ group to discuss management. If unavailable/does not have privileges at Childrens, contact the Children's ENT provider on call.

Note 2. Tranexamic (TXA) Dosing (Contraindicated in thrombotic disease)

Nebulized
- ≤25 kg - 250 mg q 20 min. up to 3x
- >25 kg – 500 mg q 20 min. up to 3x

Intravenous
- 10 mg/kg up to 1000 mg q 8H

Note 3. Transfusion Criteria
- Hgb <7
- Hgb <8 if any ongoing bleeding or symptomatic anemia
- Hgb 8-10 if ongoing heavy bleeding

Monitor for 3 hours since last bleed

No ← Recheck 20 minutes after TXA. Bleeding continues?

No → Bleeding resumes?

Yes → **Operating room** Alert Anesthesia on call

Off pathway. If admitted, provider to discuss plan of care and if TXA recommended (Note 4) with ENT. Avoid NSAIDs.

Disposition

Admit if any of the following:
- Hgb <8
- Transfused PRBC's
- Bleeding disorder
- Provider discretion
- On admission, consider TXA (Note 4) and avoid NSAIDS (Note 5)

Discharge Plan:
- Follow up plan with ENT
- Consider TXA prescription x 14 days or until eschar falls off (Note 4)
- Avoid NSAIDS (Note 5)
- Soft diet for 2 weeks

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Note 4. Oral Tranexamic acid and Aminocaproic acid dosing. See also Children's MN Policy 321.00 on Therapeutic Substitution

Unless contraindicated, patients who have had prolonged or repeated bleeding episodes should be prescribed tranexamic acid or aminocaproic acid x 14 days or until eschar falls off. Contraindications: Active or history of or intrinsic risk of thrombotic/thromboembolic disease, hematuria. To avoid formulation and insurance coverage barriers, suggest using Children's Minnesota Pharmacies.

Dosing Recommendations

Tranexamic Acid (Lysteda) Dosing* (available as 650 mg tablets)	Weight	Aminocaproic Acid (Amicar) Dosing** (available as 500 and 1000 mg tablets, and 250 mg/mL oral solution)
162.5 mg (¼ tablet) PO BID	≤ 5kg	250 mg (½ of 500 mg tab) PO Q6H
162.5 mg (¼ tablet) PO BID	5.1 – 8 kg	500 mg PO Q6H
325 mg (½ tablet) PO BID	8.1 – 10 kg	500 mg PO Q6H
325 mg (½ tablet) PO BID	10.1 – 12 kg	1000 mg PO Q6H
325 mg (½ tablet) PO TID	12.1 – 18 kg	1000 mg PO Q6H
650 mg (1 tablet) PO BID	18.1 – 20 kg	1000 mg PO Q6H
650 mg (1 tablet) PO BID	20.1 – 22 kg	1500 mg PO Q6H
650 mg (1 tablet) PO TID	22.1 – 25 kg	1500 mg PO Q6H
650 mg (1 tablet) PO TID	25.1 – 30 kg	2000 mg PO Q6H
650 mg (1 tablet) PO TID	30.1 – 40 kg	2500 mg PO Q6H
1300 mg (2 tablets) PO TID	> 40 kg	3000 mg PO Q6H

For patients unable to swallow tablets, they may be crushed and mixed in a small amount of food

*For tranexamic acid IV given orally, use 25 mg/kg (max 1300 mg) PO TID for dosing; round dose volume to nearest tenth of a millimeter.

**When converting from Amicar oral solution to IV Amicar given orally, convert dose 1:1 on a mg basis

Note 5. Ibuprofen/Motrin in post tonsillectomy bleeds

- Ibuprofen/Motrin should not be used in patients with post-tonsillectomy bleeding. While Ibuprofen/Motrin have been shown to be an important part of post op pain management and is known to be both safe and beneficial in tonsillectomy pain management, it is the consensus of this expert panel that it should not be used in patients returning for a bleed until they have had complete recovery and their risk of a bleeding diatheses has been evaluated.
- Celecoxib would be a favorable alternative if the clinician prefers an NSAID and/or an opioid sparing option.

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References

1. Dermendjieva M, Gopalsami A, Glennon N, Torbati S. Nebulized Tranexamic Acid in Secondary Post-Tonsillectomy Hemorrhage: Case Series and Review of the Literature. Clin Pract Cases Emerg Med. 2021 Aug;5(3):1-7. doi: 10.5811/cpcem.2021.5.52549. PMID: 34437029; PMCID: PMC8373187.
2. Erwin DZ, Heichel PD, Wright LM BS, Goldstein NA, McEvoy TP, Earley MA, Meyer AD. Post-tonsillectomy hemorrhage control with nebulized tranexamic acid: A retrospective cohort study. Int J Pediatr Otorhinolaryngol. 2021 Aug;147:110802. doi: 10.1016/j.ijporl.2021.110802. Epub 2021 Jun 12. PMID: 34146910.
3. Smith AL, Cornwall HL, Zhen E, et al. The therapeutic use of tranexamic acid reduces reintervention in paediatric secondary post-tonsillectomy bleeding. Aust J Otolaryngol 2020;3:10.
4. Mitchell RB, Archer SM, Ishman SL, Rosenfeld RM, Coles S, Finestone SA, Friedman NR, Giordano T, Hildrew DM, Kim TW, Lloyd RM, Parikh SR, Shulman ST, Walner DL, Walsh SA, Nnacheta LC. Clinical Practice Guideline: Tonsillectomy in Children (Update). Otolaryngol Head Neck Surg. 2019 Feb;160(1_suppl):S1-S42. doi: 10.1177/0194599818801757. PMID: 30798778.
5. Tran, A.H.L., Chin, K.L., Horne, R.S.C. et al. Hospital revisits after paediatric tonsillectomy: a cohort study. J of Otolaryngol - Head & Neck Surg 51, 1 (2022). https://doi.org/10.1186/s40463-021-00552-8
6. Alghamdi, A. S., Hazzazi, G. S., Shaheen, M. H., Bosaeed, K. M., Kutubkhana, R. H., Alharbi, R. A., Abu-Zaid, A., & Felemban, R. A. (2025). Nebulized tranexamic acid for treatment of post-tonsillectomy bleeding: a systematic review and meta-analysis. *European Archives of Oto-Rhino-Laryngology*, *282*(3), 1135–1146. https://doi.org/10.1007/s00405-024-08995-1