Epistaxis

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Exemplar Case

74 year old woman presenting with a nose bleed for 1 hour

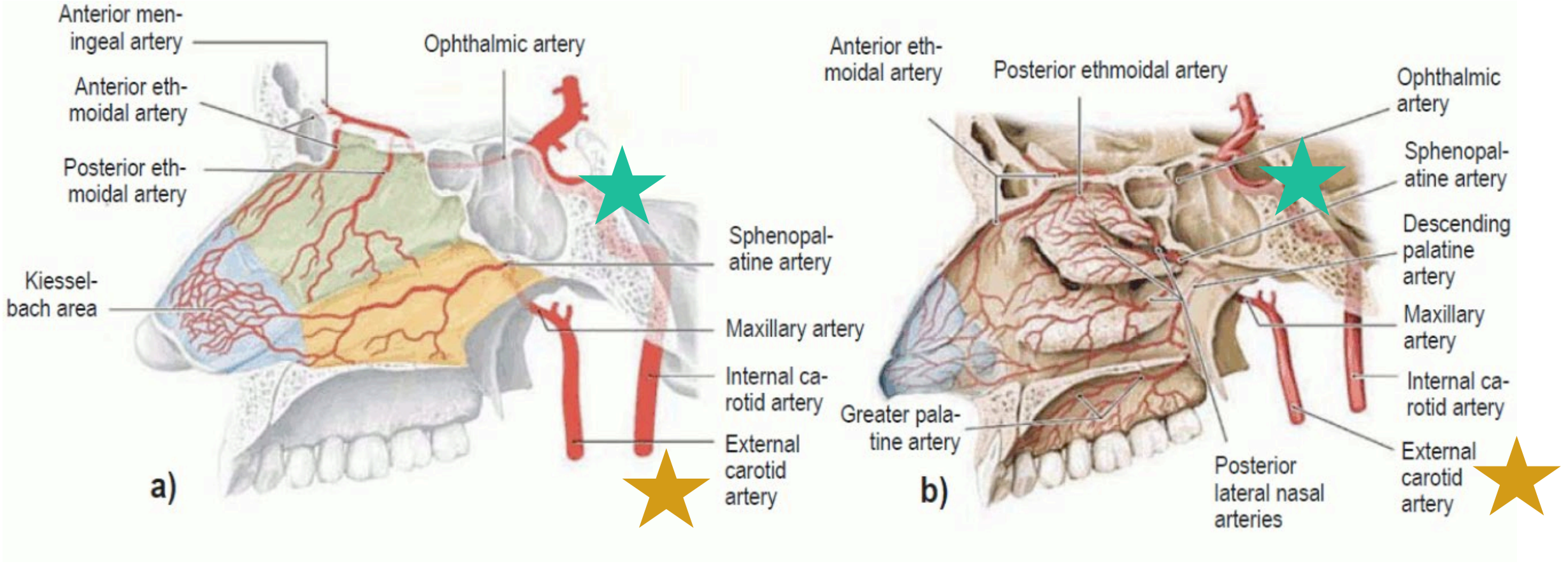
Objectives

- Review relevant nasal anatomy
- Formulate a step wise approach to managing epistaxis
- Discuss controversial topics in epistaxis management including antibiotics, blood pressure control, and use of TXA

Epistaxis

- Common ED complaint
- >90% are benign
- HTN, DM
- Anticoagulants
- Antiplatelets
- Digital manipulation
- Intranasal drug use
- Seasonal changes
- Trauma, tumors, coagulopathy

Relevant Anatomy



Exemplar Case

- 74 y/o with 1 hour of nosebleed
- Takes DAPT post stent for CAD
- Getting over a cold
- Mild dementia, picking behavior
- No other complaints

Exemplar Case

- T 36.5 HR 78 BP 195/101 RR 10 O2 94%
- ABCs notable for blood in the posterior oropharynx slowly dripping down
- No obvious arterial bleed in the anterior nose, no source seen

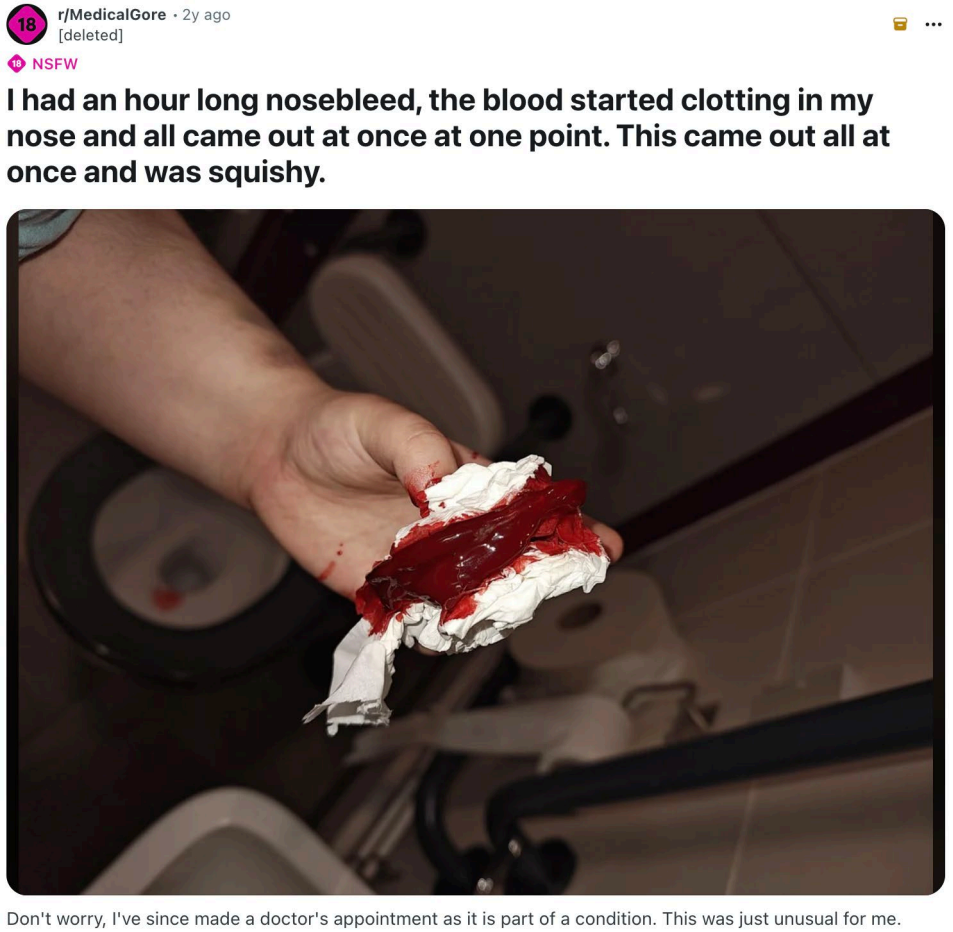
Initial steps?

- Would you get labs?
- Manage the blood pressure?
- Start antibiotics?
- Initiate mechanical interventions?
- Initiate pharmacologic interventions?

Epistaxis Treatment Algorithm

First Phase

- PPE and epistaxis box
- Clear the clot, sniffing position
- Manual pressure min 15 mins ★
- Order Afrin to bedside
  - Ice not likely to help



Our Case

- Patient is coached to clear clot and hold her nose for 15 minutes
- Re-evaluation at 20 minutes shows no resolution
- CBC and INR wnl
- Vitals stable, still hypertensive

Epistaxis Treatment Algorithm

Second Phase

- Vasoconstrictors (afrin, epi, phenylephrine)
- Anesthetize
- Cautery (silver nitrate, electric)
- Packing
  - Rhino rocket
  - Merocel/Vaseline Gauze
  - Gelfoam/Surgicel
- Order TXA to the bedside

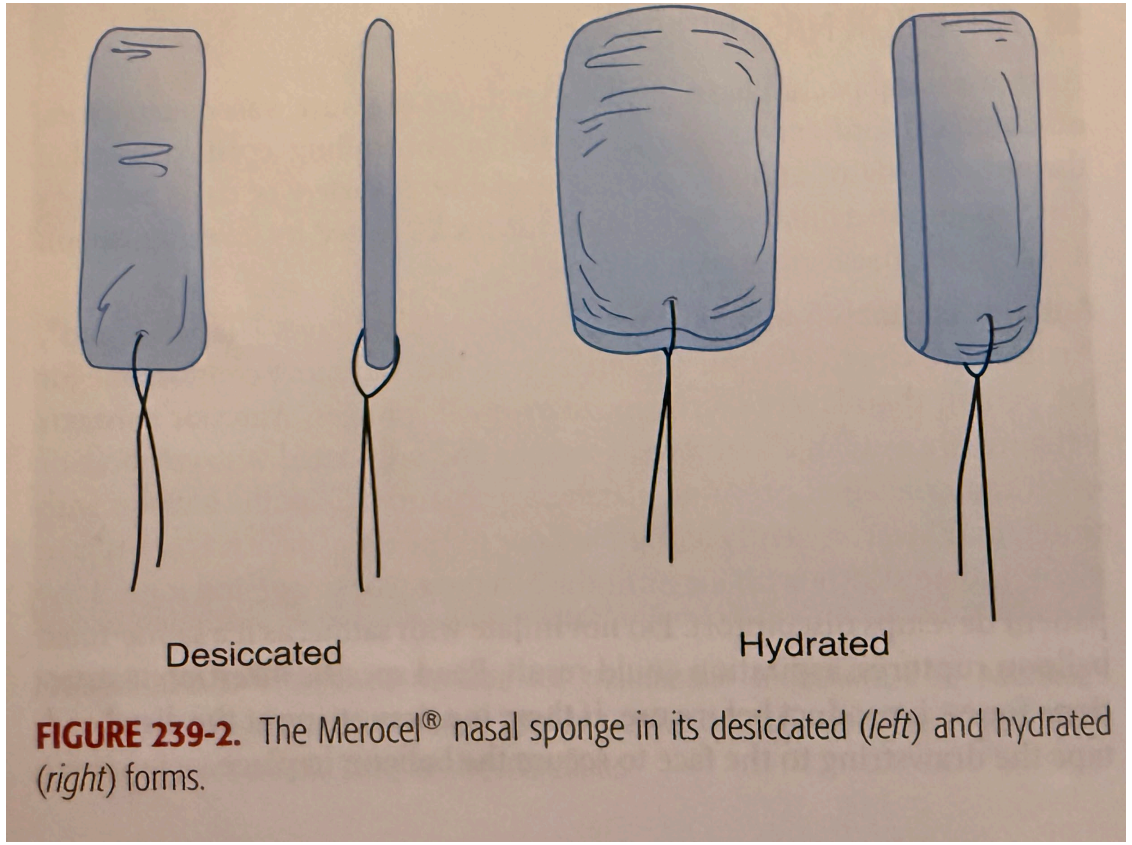


FIGURE 239-2. The Merocel® nasal sponge in its desiccated (*left*) and hydrated (*right*) forms.

Rhino Rocket

Randomized Controlled Trial > Acad Emerg Med. 2018 Mar;25(3):261-266.
doi: 10.1111/acem.13345. Epub 2017 Dec 9.

Topical Tranexamic Acid Compared With Anterior Nasal Packing for Treatment of Epistaxis in Patients Taking Antiplatelet Drugs: Randomized Controlled Trial

Reza Zahed [1], Mohammad Hossain Mousavi Jazayeri [2], Asieh Naderi [3], Zeinab Naderpour [4], Morteza Saeedi [5]

Affiliations + expand

PMID: 29125679 DOI: 10.1111/acem.13345

Results: Within 10 minutes of treatment, bleeding was stopped in 73% of the patients in the TXA group, compared with 29% in the ANP group (difference = 44%, 95% confidence interval, 26% to 57%; p < 0.001). Additionally, rebleeding was reported in 5 and 10% of patients during the first 24 hours in the TXA and the ANP groups, respectively. At 1 week, 5% of patients in the TXA group and 21% of patients in the ANP group had experienced recurrent bleeding (p = 0.007). Patients in the TXA group reported higher satisfaction scores (median [interquartile range {IQR}], 9 [8-9.25]) compared with the ANP group (median [IQR] = 4 [3-5]; p < 0.001). Discharge from the ED in <2 hours was achieved in 97% of patients in the TXA group versus 13% in the ANP group (p < 0.001). There were no adverse events reported in either group.

Conclusions: In our study population, epistaxis treatment with topical application of TXA resulted in faster bleeding cessation, less rebleeding at 1 week, shorter ED LOS, and higher patient satisfaction compared with ANP.

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General medicine/original research

The Use of Tranexamic Acid to Reduce the Need for Nasal Packing in Epistaxis (NoPAC): Randomized Controlled Trial

Adam Reuben MB ChB [a], Andrew Appelboam MBBS [a], Kara N. Stevens PhD [b], Jane Vickery PhD [c], Paul Ewings PhD [d e], Wendy Ingram PhD [c], Alison N. Jeffery PhD [c], Richard Body PhD [f], Malcolm Hilton BM BCh [a], Jason Coppell MBBS [a], Brian Wainman [c], Andy Barton PhD [d]
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Results

The study sample consisted of 496 participants with spontaneous epistaxis, persisting after simple first aid and application of a topical vasoconstrictor. In total, 211 participants (42.5%) received anterior nasal packing during the index ED attendance, including 111 of 254 (43.7%) in the tranexamic acid group versus 100 of 242 (41.3%) in the placebo group. The difference was not statistically significant (odds ratio 1.107; 95% confidence interval 0.769 to 1.594; *P*=.59). Furthermore, there were no statistically significant differences between tranexamic acid and placebo for any of the secondary outcome measures.

Conclusion

In patients presenting to an ED with atraumatic epistaxis that is uncontrolled with simple first aid measures, topical tranexamic acid applied in the bleeding nostril on a cotton wool dental roll is no more effective than placebo at controlling bleeding and reducing the need for anterior nasal packing.

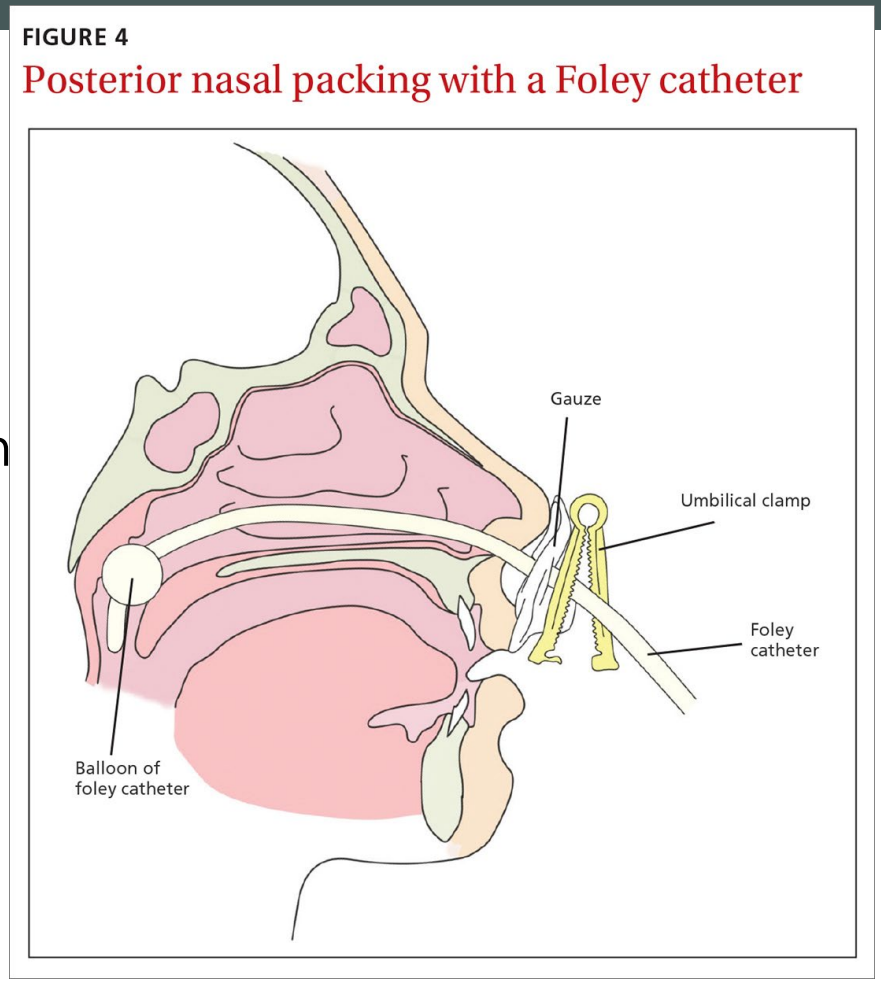
Our Case

- Rhino rocket placed
- 30 minutes later patient is coughing up blood
- BP trending down, pt appears anxious

Epistaxis Treatment Algorithm

Third Phase

- Call the otolaryngologist
- Posterior Packing
- Consider Adjunct Intervention
  - Sedation and intubation
  - Reversal of anticoagulants
- Imaging
- Admission



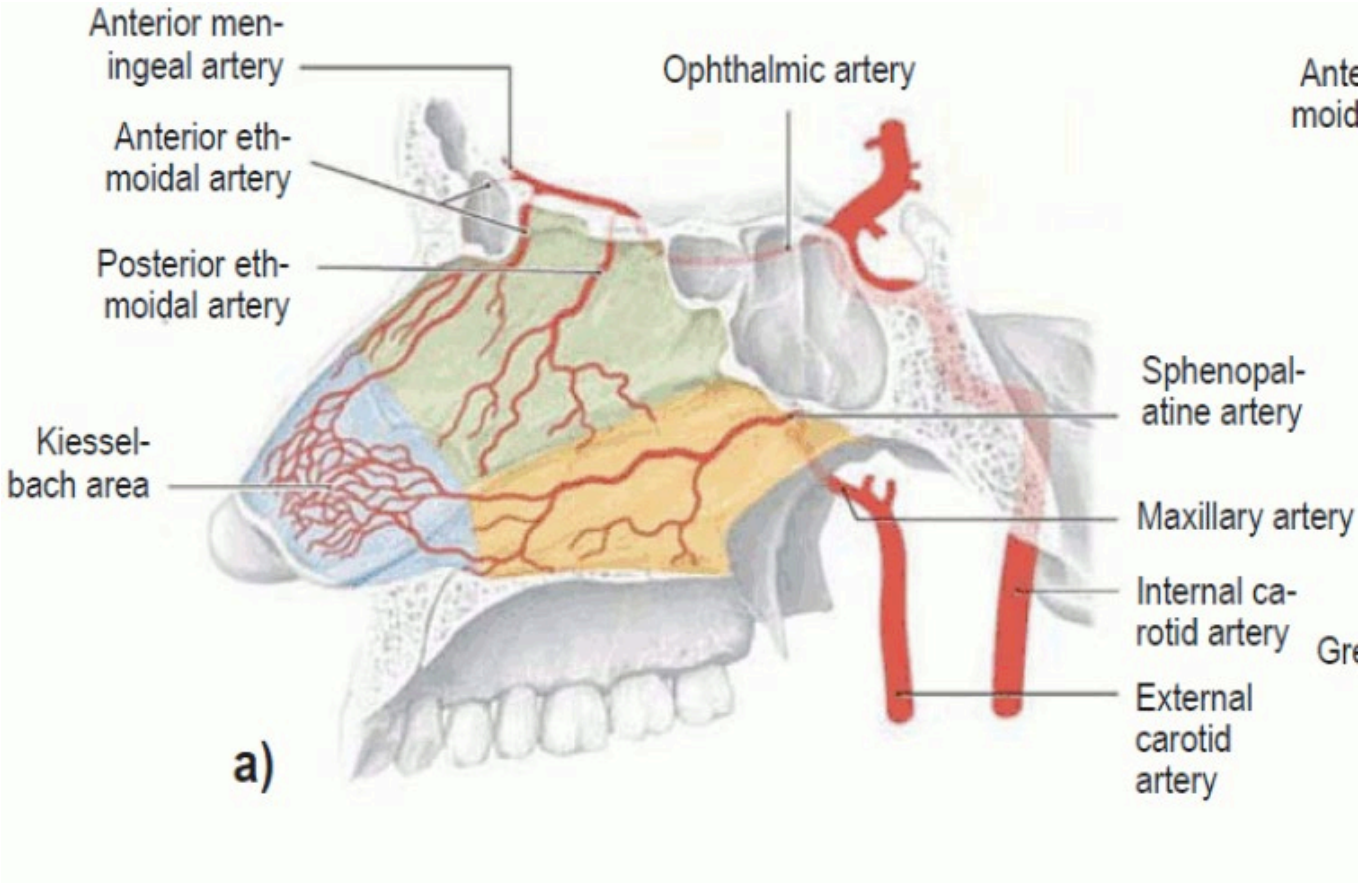
Our Case

- ENT says they are hurrying down and asks you to try a TXA soaked rhino rocket
- Bleeding resolves, BP stable
- After an hour of observation patient is comfortable, ENT deems them safe to go home, recommend medical management of BP and prophylactic antibiotics for just in case

ENT management of Epistaxis

Fourth/ENT Phase

- Repacking
- Surgicel or gel foam
- Operative management
- Interventional radiology



Controversies

- **Antibiotics are NOT likely to be useful in most cases.** No evidence they prevent infection or toxic shock. Consider in high risk patients with packing >48 hours.
- **Acute BP management is not helpful.** HTN is more likely a result of pain and anxiety. However, oral medications to manage BP have significant benefit on cessation of bleeding and preventing recurrence.

Current Approaches to Epistaxis Treatment in Primary and Secondary Care

Dtsch Arztebl Int 2018; 115: 12-22. DOI: 10.3238/arztebl.2018.0012

Beck, R; Sorge, M; Schneider, A; Dietz, A

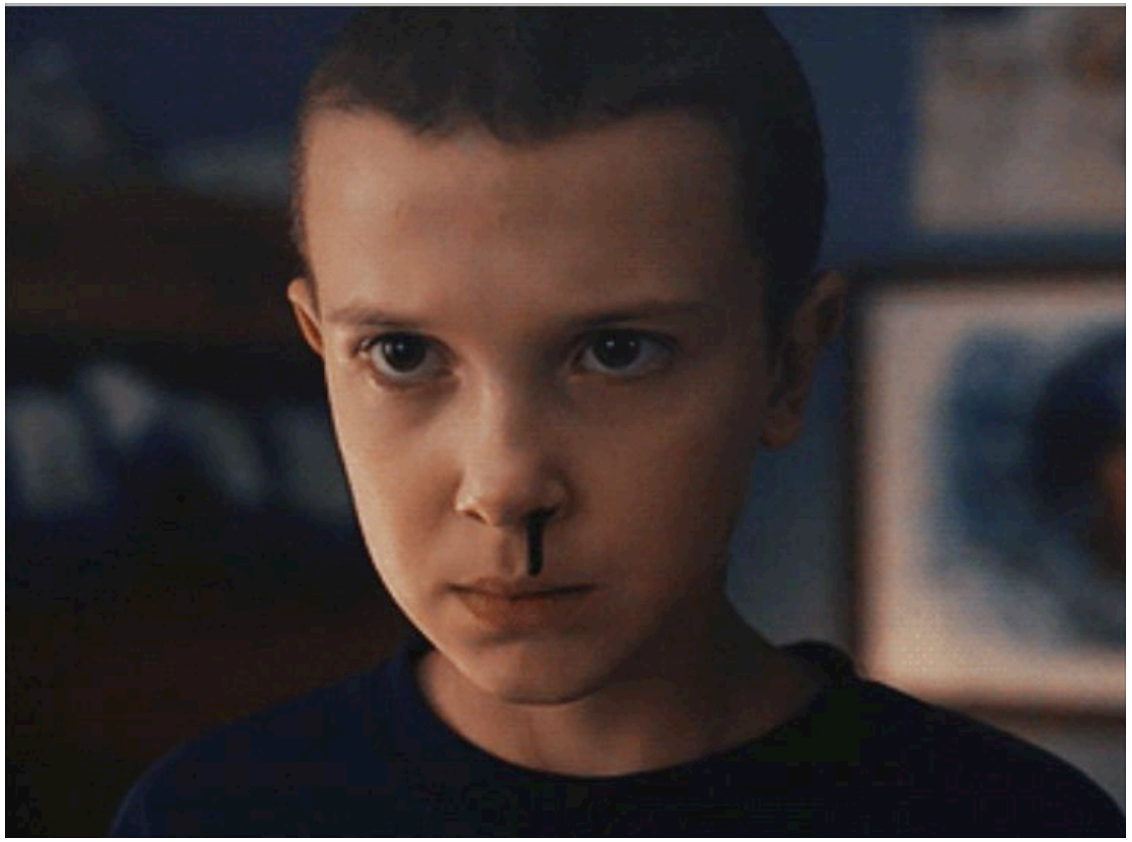
Is epistaxis associated with arterial hypertension? A systematic review of the literature

Review Article | Published: 29 March 2013

Volume 271, pages 237–243, (2014) Cite this article

Secondary prevention

- Avoid nose picking
- Good nasal hygiene
- BP management
- ENT referral



Review

Phase 1

-ABCs

-Remove the clot

-Spray in some **afrin**

-**Hold pressure**

-Get labs if high risk

Phase 2

-Vasoconstrict and anesthetize

-Cauterize

-Consider TXA

-**Pack** however you feel most comfortable

Phase 3

-Call ENT

-Consider sedation and intubation

-Adjunct interventions

-**Posterior packing**

-Consider imaging

-Admission/Obs

Tidbits

-Acute BP management isn't indicated

-Routine antibiotics are not indicated

-Remember secondary prevention

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Images
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