Management of Epistaxis

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A 71-year-old man presents to the emergency department with bleeding from his left nostril for about an hour. He thinks he has bled about a cup. No history of trauma, nasal or sinus disease, or bleeding dyscrasias. He has hypertension. He takes aspirin and metoprolol.

Do we feel comfortable managing this?!
First things first...

TREATMENT BASICS!
Keys to Success!

1. Take your time!
2. Make your patient comfortable
3. Gather equipment and hands
4. Visualize what you are doing
A Little Help?

- Comfortable chair
- Head forward (pillow?)
- Gear them up!
  - Chuk for lap and front, container, suction, *moist* washcloths
- Anti-nausea, anti-HTN and pain meds?
Blood Supply to the Nasal Septum and Lateral Nasal Wall

Anterior Nosebleeds

Posterior Nosebleeds

What Causes Bleeding?

- Digital trauma
- Dry nasal mucosa
  - Dry air, nasal oxygen, nasal steroid spray
- Inflammation in rhinitis
Increased Epistaxis Risk...

- Blood disorders
  - Thrombocytopenia, Von Willebrand, Hemophilia
- Liver disease
- Cancer
  - Leukemia
- Infection
  - HIV
Some Other Risks...

- Vascular malformations
- Neoplasm
- Barotrauma
- Prior surgery
- Cocaine
Less Than 2 Years...

- Trauma?
- Nasal foreign body
- Bleeding disorder
How About These Meds?
So What’s the Risk?

• 10,241 out-patients with bleeding
  – Aspirin group, RR = 9.04 (95% CI 5.13-15.96)
  – Clopidogrel group, RR = 6.40 (95% CI = 2.33-17.56)
  – Aspirin vs. Clopidogrel, RR = 1.4 (95% CI = 0.6-3.4)
  – Aspirin 2%, Clopidogrel 1%, neither 0.2%

Rainsbury, Clin Otolaryngol, 2009
Low-dose Aspirin

- Randomized trial of women
- 10 years, 40,000 patients
- Low-dose aspirin
- Aspirin vs. placebo → 19.1% vs. 16.7%

Ridker, N Engl J Med, 2005
What about Warfarin?

- Common to have bleeding, but..
- If therapeutic INR, no reversal is required
What about Hypertension?

- 9 studies, 2,994 patients
  - Blood pressure is higher at the time of epistaxis (6/9 studies)
  - No causative relationship

Kikidis, Eur Arch Otorhinolaryngol, 2014
Resuscitation
Prepare Thyself!
But Before That...

• Take a look. Anterior bleed?
Step 1: Spray and Pinch

1. Oxymetazoline (Afrin) – 2 squirts
2. Pinch high and tight!
10 – 15 Minutes

No Peeking!
Not the greatest...
What’s wrong?
Better...
Silver Nitrate Swabs
Still Bleeding?

Step 2: Cotton Pledgets

• Remove clots! (fibrinolytic)
• Soak in vasoconstrictor (Phenylephrine 0.5-1% or Oxymetazoline 0.05%), and anesthetic (Lidocaine 2-4% or Cocaine 4%)
• Place posterior, superior and anterior
Still Bleeding?

Step 2: Cotton Pledgets

• Consider Tranexamic Acid!
  – 216 patient with anterior epistaxis
  – TA vs. Epinephrine + Lidocaine
  – Bleeding stopped in 10 mins – 71% vs. 31%
  – Rebleeding w/in 24 hours – 4.7% vs. 12.8%

Still Bleeding?

Step 3: Cautery

• Chemical – silver nitrate (75%)
• Rules
  1. Bleeding is slow or oozing
  2. Not more than one side of the septum
  3. No more than 2 seconds in one spot
  4. Circle towards the bleeding point
bleeding
Still Not Working?

Step 4: Anterior Packing

- Ribbon gauze coated with petroleum jelly
- Hydroxylated polyvinyl acetate sponge (Merocel)
- Inflatable pack with hydrocolloid coating (Rapid Rhino)
Hemostatic Products

- Absorbable so no removal
- **Surgicel** and **Gel-foam** to wound
- **Surgiflo** and **FloSeal** – powder that form slurries, in place of packing
Still Not Working?

**Step 5: Posterior and Anterior Packing**

- 10 to 14 Foley cath with balloon inflated 10-15cc air or water, **OR**
- Two-balloon catheter
When Do I Admit?

• Any significant bleed
• Hemodynamic instability
• Coagulopathy
• Inadequate hemostasis
• Frail, elderly, lung and heart co-morbidities
• Posterior packing
Any Imaging Studies?

• Recurrent unexplained unilateral bleeding
  – nasal obstruction, rhinorrhea, facial pain, cranial neuropathies such as facial numbness or double vision
• Contrasted CT or MRI

Rainsbury, Clin Otolaryngol, 2009
Preventing Nosebleeds

• Nasal humidification
  – Humidifier at night
  – Liberal application of petroleum jelly

• Clip nails!
Summing Up The Process...

- Assess hemodynamic stability
- Tend to the patients comfort
- Be prepared with equipment, help, lighting
- Stepwise care
The Stepwise Approach

1. Afrin and pinch
2. Pledgets with a vasoconstrictor and analgesic
3. Cautery +/- hemostatic agent
4. Anterior packing
5. Balloon tamponade for posterior bleed
Thank you!

Questions?
References