College of Registered Nurses of Saskatchewan

Anterior Epistaxis: Adult & Pediatric

Ears, Eyes, Nose, Throat and Mouth

Clinical Decision Tools for RNs with Additional Authorized Practice [RN(AAP)s]

Effective Date: May 4, 2022

Background

Anterior epistaxis is defined as bleeding from the nostril, usually from Little's area (Kiesselbach's plexus) located in the anterior nasal septum (McCaffrey, Dunphy, & Porter, 2019).

Epistaxis is common in children under the age of 10 and adults over the age of 50 (McCaffrey et al., 2019). Typically, it can be attributed to trauma and/or irritation, drying of nasal mucosa due to lack of humidity in the environment, foreign body and rarely a nasal tumour (McCaffrey et al., 2019).

Immediate Consultation Requirements

The RN(AAP) should seek immediate consultation from a physician/NP when any of the following circumstances exist:

- compromised airway, breathing, or circulation (ABCs);
- unstable vital signs or shock;
- aspiration;
- profuse bleeding;
- systemic illness that may cause bleeding (e.g., disseminated intravascular coagulation, hemophilia);
- client requiring nasal cautery;
- posterior epistaxis; or
- suspected facial fracture to rule out septal hematoma (Hakim, Mummadi, Jolly, Dawson, & Darr, 2018; Interprofessional Advisory Group [IPAG], personal communication, August 28, 2019).

The RN(AAP) should initiate an intravenous fluid replacement as ordered by the physician/NP or as contained in an applicable RN Clinical Protocol within RN Specialty Practices if any of the Immediate Consultation circumstances exist.

Predisposing and Risk Factors

Predisposing and risk factors for anterior epistaxis include:

- allergic rhinitis,
- deviated nasal septum,
- infection of the upper respiratory tract,
- local vascular lesions,
- nasal polyps,
- cocaine use (e.g., sniffing, huffing),
- prolonged use of nasal decongestant spray,
- systemic coagulopathies (e.g., hemophilia, von Willebrand's disease),
- use of certain drugs (e.g., warfarin, nonsteroidal anti-inflammatory drugs [NSAIDs]),
- hematological malignancies,
- hypertension,
- liver failure, or
- uremia (McCaffrey et al., 2019).

Health History and Physical Exam

Subjective Findings

The circumstances of the presenting complaint should be determined including:

- type of bleeding, profuse versus blood-streaked nasal discharge;
- bleeding from one or both nares, anterior epistaxis is typically unilateral;
- duration, amount and frequency of bleeding;
- timing of epistaxis related to activities;
- possibility of foreign body;
- use of anticoagulants (e.g., aspirin, warfarin, direct-acting anticoagulants), or other medications such as topical nasal steroid sprays;
- recreational drug use (e.g., cocaine);
- history of easy bruising or bleeding elsewhere (e.g., melena, heavy menstrual periods); and/or
- client or family history of bleeding disorders (Hakim et al., 2018; McCaffrey et al., 2019).

Objective Findings

The RN(AAP) should examine the client sitting up and leaning forward so that blood will flow forward.

The client with anterior epistaxis may have signs and symptoms including:

- petechiae, purpura, or pallor of skin;
- a decrease in blood pressure, typically only if bleeding is severe enough to cause loss of volume;

- an increased pulse due to anxiety or loss of volume;
- tenderness to palpation of sinuses;
- examination of the nose with speculum and light source may reveal bleeding from Little's area (Kiesselbach's plexus) or from the anterior portion of the septum;
- a polyp, tumour, or foreign body may be visualized; or
- palpation may reveal lymphadenopathy and/or hepatosplenomegaly (McCaffrey et al., 2019).

Differential Diagnosis

The following should be considered as part of the differential diagnosis:

- nasal fracture,
- foreign body (especially in the pediatric population),
- tumour/polyp,
- blood dyscrasias, or
- posterior epistaxis (McCaffrey et al., 2019).

Making the Diagnosis

The diagnosis is based on history and physical findings.

Investigations and Diagnostic Tests

Consider ordering a CBC, platelet count, and PT/PTT in recurrent epistaxis where the suspected cause may be other than mucosal drying or irritation (McCaffrey et al., 2019). An INR should be ordered for clients taking warfarin (McCaffrey et al., 2019).

Management and Interventions

Goals of Treatment

The primary goals of immediate treatment are to stop the bleeding, identify local or systemic causes of the bleeding, and prevent further episodes (McCaffrey et al., 2019).

Non-Pharmacological Interventions

The RN(AAP) should recommend, as appropriate, the following non-pharmacological options:

- Position the client in an upright position with their head tilted forward and application of firm pressure (with or without concurrent use of ice) to the soft cartilaginous aspect of nose for 10-15 minutes. Do not remove pressure to assess if bleeding has stopped until 10-15 minutes has passed.
- Encourage the client to spit blood or clots from the posterior pharynx to reduce risk of aspiration and emesis (McCaffrey et al., 2019; Pickup, 2022).

Pharmacological Interventions

The pharmacological interventions recommended for the treatment of anterior epistaxis are in accordance with the *Nurse-Led Epistaxis Management Within the Emergency Department* (Hakim et al., 2018), *Anterior Nasal Packing for Epistaxis* (Goralnick, 2017), *Epistaxis* (McCaffrey et al., 2019), and *Procedures for Controlling Epistaxis* (Pickup, 2022), and are performed sequentially.

Local Vasoconstriction

After gently suctioning clotted blood from the nose, administer the following:

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	Xylometazoline 0.1% drops	Soak a cotton ball into the medication and place it in the anterior portion of the nose. Press firmly against the bleeding nasal septum.	topical	once	10-20 minutes

Nasal Packing

If the above measure fails to control bleeding, nasal packing should be performed.

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	1% lidocaine with EPINEPHrine (1:1000)	Soak 1-2 cotton balls into the medication and place it in the anterior portion of the nose. If bleeding is not clearly unilateral, put cotton balls into both nostrils. Press firmly against the bleeding nasal septum.	topical	once	10 minutes Upon removal, have client gently blow nose to remove clots.

Following removal of cotton balls, pack the nasal cavity with traditional ½ inch ribbon gauze packing or commercially available nasal sponges or tampons (e.g., Rapid Rhino or Merocel, follow the manufacturer's instructions for insertion).

Directions for inserting ribbon gauze soaked in petroleum jelly are as follows:

- Layer the gauze anteriorly as far posteriorly as possible, starting at the nasal floor and going toward the nasal roof.
- Use of Bayonet forceps may help ensure the ribbon gauze is inserted as posteriorly as possible. A 72-inch length of gauze strip is typically accommodated if the packing is placed correctly.
- Tape a 2x2 gauze pad over the nostril to prevent the packing from being dislodged and to catch drops of blood.
- Leave in place for two to three days and avoid manipulation/removal unless significant complications.
- Have the client return the next day to monitor for signs of complications including:
  - fever,
  - persistent bleeding,
  - toxic shock,
  - septal hematoma,
  - septal abscess,
  - sinusitis, or
  - pressure necrosis (McCaffrey et al., 2019).

Client and Caregiver Education

The RN(AAP) provides client and caregiver education:

- Counsel about appropriate use of medication (dose, side effects, avoidance of overuse, etc.).
- Recommend increasing room humidity with a humidifier.
- Recommend humidification of the nasal mucosa with saline drops or water-based nasal lubricant applied bid to qid.
- Recommend avoidance of known irritants and local trauma (e.g., nose-picking, forceful nose-blowing).
- Instruct about first-aid control of recurrent epistaxis. Advise to sit up and lean forward, applying firm, direct pressure to nasal cartilage (not bones) for at least 10-15 minutes before checking if the bleeding has stopped. Seek care if bleeding has not stopped after 20 minutes of first aid measures.
- Avoid nose-blowing or sneezing or do so gently to avoid disrupting the clot.
- Avoid use of NSAIDs, hot dry climates, hot spicy foods, or strenuous activity for a few days.
- For pediatric clients, advise to keep the child's fingernails trimmed to avoid trauma from nose-picking.
- If packing is in place, advise to leave it in place, and to monitor for fever; bleeding that continues or breaks through the packing; severe pain, nausea, or vomiting; and to seek immediate care if these occur.
- Advise that the epistaxis may recur in seven to 10 days when the scab falls off.
- Advise that most anterior epistaxis from one nostril only should stop with effective pressure (Hakim et al., 2018; McCaffrey et al., 2019; Pickup, 2022).

Monitoring and Follow-Up

The RN(AAP) should monitor ABCs until stable. Follow-up as necessary if current bleeding resolves with first-line treatment.

Complications

Vasovagal syncope during nasal packing may occur (McCaffrey et al., 2019). Constant flow of blood in the posterior pharynx after packing suggests a posterior bleed, which requires a referral to a physician/NP.

Referral

Refer to a physician/NP if client presentation is consistent with those identified in the *Immediate Consultation Requirements* section, there is an inability to control the bleeding, or recurrent epistaxis (IPAG, personal communication August 28, 2019).

References

Goralnick, E. (2017). *Anterior nasal packing for epistaxis*. www.medscape.com

Hakim, N., Mummadi, S. M., Jolly, K., Dawson, J., & Darr, A. (2018). Nurse-led epistaxis management within the emergency department. *British Journal of Nursing, 27*(1), 41-46. doi.org/10.12968/bjon.2018.27.1.41

McCaffrey, R., Dunphy, L., & Porter, B. (2019). Epistaxis. In L. Dunphy, J. Winland-Brown, B. Porter, & D. Thomas (Eds.), *Primary care: The art and science ofadvanced practice nursing – an interprofessional approach* (5th ed., pp. 346-348). F. A. Davis.

Pickup, L. A. (2022). Procedures for controlling epistaxis. In T. Campo, T. Costantino, & J. Willbeck (Eds.), *Essential procedures for emergency, urgent, and primary care settings: A clinical companion* (3rd ed., pp. 491-495). Springer