NOSE BLEEDS

Alternative names: epistaxis

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Background information

Definitions of levels of care (in this guideline)

- Level 1: Community healthcare worker/non-doctor
- Level 2: Medical doctor
- Level 3: ENT Surgeon

Background

Epistaxis is the most common acute presentation to ENT services and carries a lifelong incidence of 60% across the general population.[1] Although the vast majority of cases are fairly self-limiting and benign, those that become profuse and unrelenting carry significant clinical urgency and potential mortality.

In fact, epistaxis in isolation is the most common acute emergency managed by ENT departments across the UK and accounts for over 25,000 presentations to secondary care each year.[2]

It is therefore surprising that, until the publication of the most recent British Rhinological Society guidelines, no distinct, nor formal guidelines for the management of a condition existed that accounts for over £1.5 million in just hospital beds alone.[3]

It is routinely assumed that the initial investigation of acute epistaxis should include a patient history and clinical assessment and it is integral to these processes that particular aspects of a patient's history are noted. These include but are not limited to the onset, duration and frequency of the epistaxis, as well as the laterality and predisposing factors, such as anticoagulation, nasal trauma and recent surgery.

Clinical examination should also be coupled with an appreciation of the previous attempts to resolve the epistaxis, be that through nasal compression, packing tamponade or attempted cautery. It is only through acquisition of these details that an appropriate management plan can be formulated.

Significant variation in clinical practice had been demonstrated amongst hospital trusts in the UK[3], within hospital trusts in the UK [4] and this variation is seen globally too, due to differences with regard to resources, expertise and availability of trained staff. The recent British Rhinological Society multidisciplinary consensus recommendations[3] provide new guidance on hospital management of epistaxis and this is included in this guideline.

Signs and symptoms associated with epistaxis may include:

- Bleeding from one or both nostrils and bleeding down the back of the throat with spitting, coughing, or vomiting of blood
- +/- airway compromise
- +/- Haemorrhagic shock
- Prolonged or recurrent nosebleeds may cause anaemia

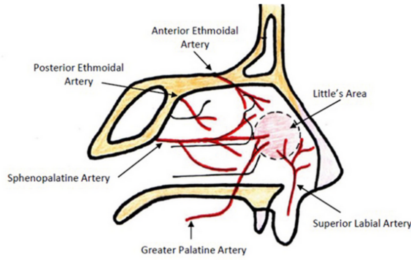


Figure: Blood supply to the nasal septum;
Source: https://www.racgp.org.au/afp/2015/september/an-update-on-epistaxis

Causes:

Local causes	General causes
Spontaneous: Little's area (anterior)	Cardiovascular conditions
Trauma: nasal fractures, septal ulcers, chronic perforations	Hypertension
Postoperative bleeding	Raised venous pressure (mitral stenosis)
Tumours (benign and malignant), granulomas	Coagulation or vessel defects
Hereditary telangiectasia	Haemophilia
Autoimmune disease	Leukaemia
Others	Anticoagulation therapy Thrombocytopaenia Fevers, infections (rare) Typhoid fever Influenza

Source: Australian Family Physician 31(8):717-21

Complications:

- Sinusitis.
- Septal hematoma/perforation.
- External nasal deformity.
- Mucosal pressure necrosis.
- Vasovagal episode.
- Balloon migration.
- Aspiration.

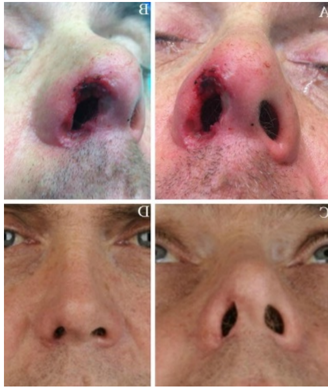


Figure: Mucosal pressure necrosis.
Source: https://link.springer.com/article/10.1007/s00405-015-3529-5

Examination and investigations

General:
- Wear PPE and a face shield

Level 1:
- Use a light source and get an assistant
- Use a light source to check the nose, septum and anterior nasal cavity
- Use a tongue depressor and the light source to examine the mouth. Ask the patient to stick his or her tongue out and say "aaah": assess for any posterior epistaxis.

Level 2:
- Prepare suction if available and wear PPE and a face shield
- Wear a headlight +/- other form of light source and perform an anterior rhinoscopy with a nasal speculum.
- Wear a headlight and use a tongue depressor to examine the mouth. Ask the patient to stick his or her tongue out and say "aaah": assess for any posterior epistaxis.

Level 3:
- Prepare suction if available and wear PPE and a face shield
- Wear a headlight and examine the nose with a speculum, performing an anterior rhinoscopy +/- endoscopy
- Blood tests, incl cross match, clotting, etc.
- Consider removing any pre-existing packs if bleeding is still ongoing and also if you suspect inappropriate packing and if there is a history suggestive of anterior nasal bleeding with a potential bleeding point that may be amenable to nasal cautery

Management

General:
- Follow the ABCDE protocol and 1st aid/Basic Life Support +/- Advanced Life Support guidelines

Level 1:

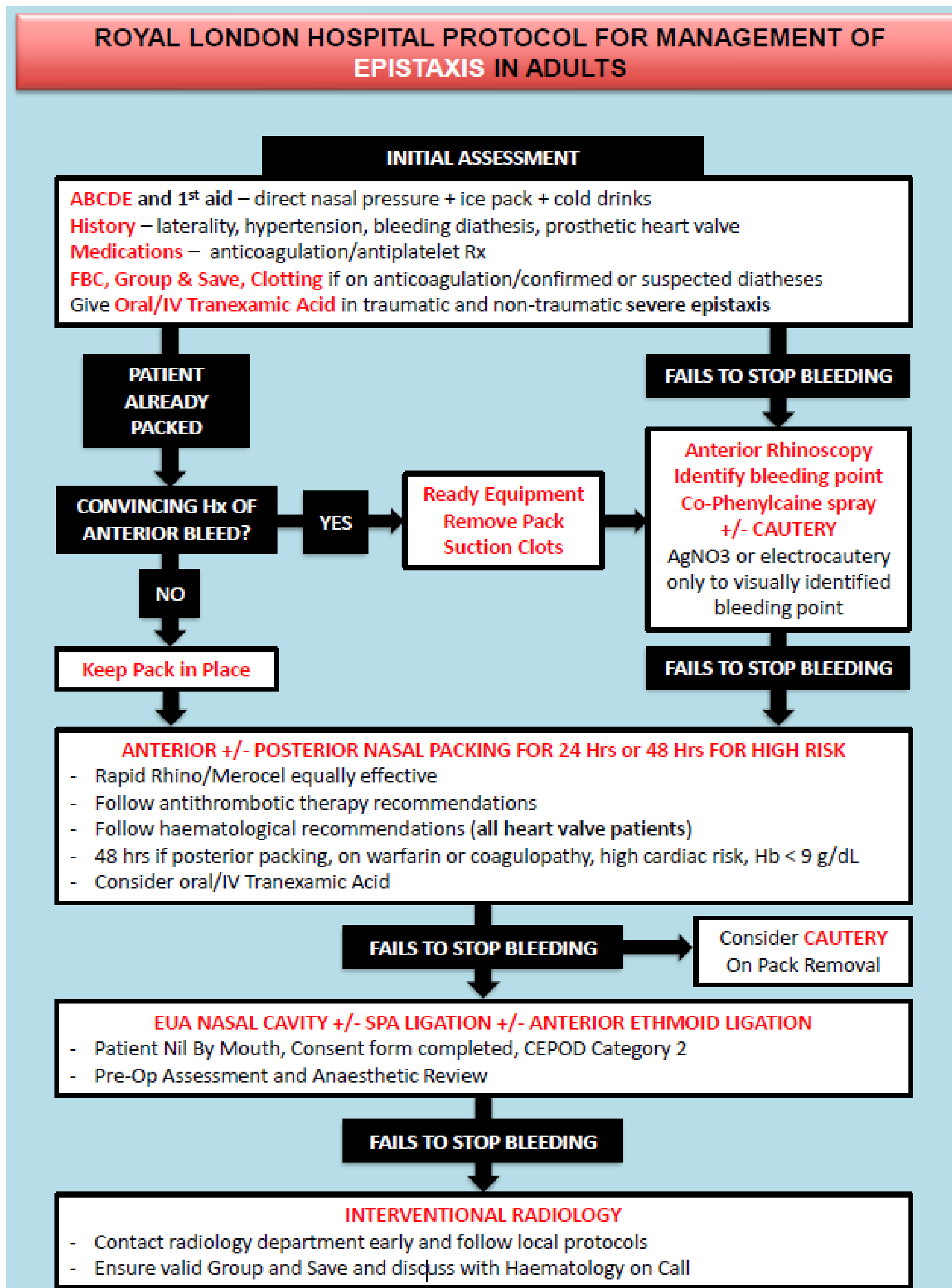
- Wear protective clothing and a face shield
- Apply direct nasal pressure + ice pack + cold drinks
- consider Tranexamic acid 1g orally

Levels 2:

- In low-resource settings, ENT review may not be immediately available
- Prepare suction if available and wear PPE and a face shield
- Identify the bleeding point (and consider cauterisation if anterior)
- Apply non-absorbable nasal packing (if available) to the affected nasal cavity +/- the other nasal cavity
- consider Tranexamic acid 1g IV
- In case of recurrent cases, surgery may not be available or have a long waiting time, but endoscopic examination +/- imaging is needed in case a mass is suspected.

Level 3:

- In a secondary or tertiary level centre, the below guidelines may be useful to apply.
- Consider tranexamic acid IV



Further reading

1 - Cummings CW, Flint PW, Harker LA, Haughey BH., Cummings Otolaryngology, *Mosby Inc.*, 2004

2 - NICE, Costing Statement: Implementing The NICE Guideline On Transition Between Inpatient Hospital Settings And Community Or Care Home Settings For Adults With Social Care Needs (NG27). Putting NICE Guidance into Practice. *NICE*. 2015, Available at: https://www.nice.org.uk/guidance/ng27/resources/costing-statement-2187244909

3 - National ENT Trainee Research Network, British Rhinological Society Multidisciplinary Consensus Recommendations on the Hospital Management of Epistaxis, *J Laryngol Otol.* 2017

Dec;131(12):1142-1156. doi: 10.1017/S0022215117002018.

4 - Creating a Protocol for the Management of Epistaxis in a Tertiary Care Centre - A Practical Application of the British Rhinological Society Multidisciplinary Consensus Recommendations on the Hospital Management of Epistaxis. M. Lechner, et al.; Acta Scientific Otolaryngology; 2022; 4.1: 03-06.