

## Classification

- *Anterior haemorrhage*: Bleeding source visible in ~90% - usually from the nasal septum, particularly Kiesselbach's plexus (also called Little's area ant-inf area), which is an anastomosis of sphenopalatine (branch of ECA via maxillary a.) & ant. ethmoid (branch of ICA via ophthalmic a.) arteries.
- *Posterior haemorrhage*: This emanates from deeper structures of the nose, and occurs more commonly in older individuals.

## Epidemiology

Very common. Peaks of incidence at age 2-10 and 50-80 years old. M=F.

## Aetiology

*General*: Blunt trauma to nose, excessive blowing.

*Children*: URTI, nose picking, haemophilia, Osler-Weber-Rendu (hereditary haemorrhagic telectangasia), juvenile angiofibroma in adolescent males, vWD, ITP

*Elderly*: HT (?evidence), anticoags, aspirin, atherosclerosis, tumours (nasopharyngeal Ca)

## Investigation

Unnecessary in mild cases.

*Bloods*: FBC, G&H, coags, plt function, UEC

## Management

### Initial assessment - First Aid

- PPE (gloves, gown and goggles).
- Monitor vital signs
- Resuscitate the patient (if necessary) - Airway compromise or shock are possible.
- Quick history:
  - Which nostril is bleeding? Is there blood the pharynx?
  - How long & how much blood loss? Are there symptoms of hypovolaemia?
  - Is the bleeding recurrent? What measures have been tried before?
  - Past medical history (e.g. recent trauma) and medications (esp aspirin or warfarin).
- Sit upright & slightly forward, squeeze the bottom part of the nose for 15-20min. Can spit out any blood/saliva into a bowl. Sucking ice / an ice pack on bridge of nose may help.

### Nasal Examination

- Collect the equipment you will need : lignocaine and phenylephrine spray, headtorch, suction, nasal speculum, silver nitrate cautery sticks & nasal packing.
- Blow nose /suction to remove clots.
- Apply **lignocaine** ± **adrenaline** on soaked gauze to nasal cavity.
- Examine ant nasal cavity for any bleeding points. If visible → try **silver nitrate** cautery sticks for 10s or so proximal to the bleeding point (never both sides of the septum). Can also use a cream (Naseptin®).
- if there is no further active bleeding patients can be discharged

### If bleeding continues consider packing:

- Anterior packing (for anterior bleed):
  - Horizontally insert a special nasal sponge or **Merocel**® tampon (lubricate with **chlormycetin** ointment or KY) if doesn't fully inflate with blood then use saline. Pack the other side as well. Packs are generally left in place for 24hr.

- **Rapid Rhino®** - easier & less painful - soak in water before inserting.
- Otherwise pack with layered BIPP or 1cm **ribbon gauze** impregnated with **Vaseline**.
- Tape the string or ribbon to the cheek and apply a nasal bolster.
- Anterior epistaxis is generally easy to control with local cautery.
- Posterior bleeds (around 5%) require packing and a balloon catheter can be useful here.
  - Remove anterior pack (if present)
  - Either special dual balloon catheters (Epistat®, Brighton®) or 10-14F Foley® catheter with a large balloon (20-30ml). Pass through the nose until just seen in the oropharynx, retract slightly towards the nasopharynx and then the posterior balloon (or 5 to 10ml of a single Foley balloon) is inflated. The balloon is then gently pulled forward so that it is seated in the nasopharynx as a tamponade against the bleeding. Then the 2<sup>nd</sup> anterior balloon can be inflated or an anterior pack inserted.
  - Ensure catheter is not pressing on the nose to avoid alar necrosis.
  - Patients with posterior packs require admission to hospital. The elderly and those with heart disease or COPD need supplementary oxygen.
  - Opiate analgesics to relieve discomfort of packing & ↓ BP rise due to post pack.
  - If packing fails, may need ligation or embolisation of supplying arteries (above).
- Nasal packs are usually left for 2-3d, give ABx (**amoxicillin**), and refer to ENT.

#### *Coagulopathy*

- If epistaxis, signs of hypovolaemia & ↑INR then consider **prothrombin complex concentrate** (less likely to cause fluid overload than fresh frozen plasma) and **vitamin K**.

#### *Complications of packing*

- Anosmia
- Pack falling out and continued bleeding
- Breathing difficulties and aspiration of clots
- Posterior migration of the pack causing airway obstruction and asphyxia
- Perforation of the nasal septum or pressure necrosis of cartilage