



EPISTAXIS

Mohamed Bilal P I



INTRODUCTION

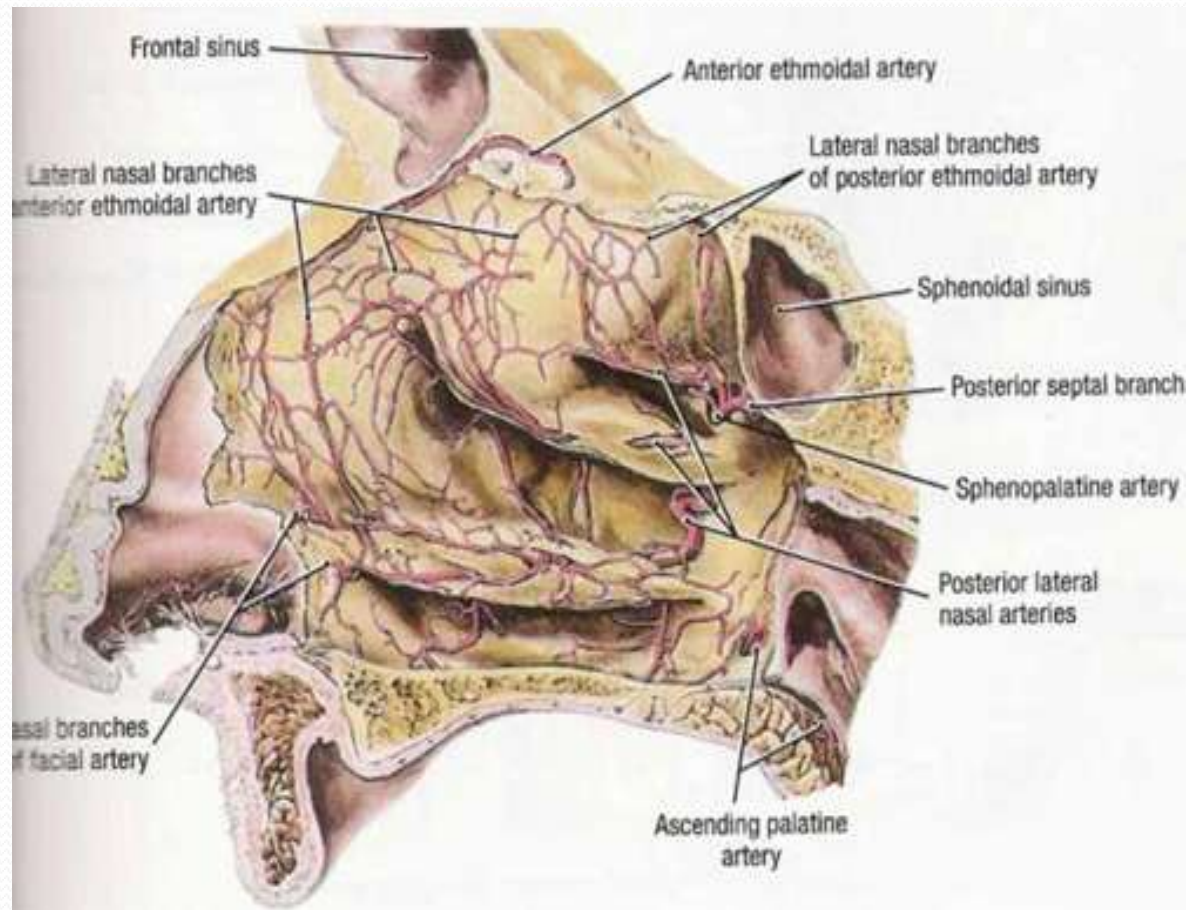
- Bleeding from nostril, nasal cavity or nasopharynx
- Most often self limited, but can often be serious and life threatening
- 5-10% of the population experience an episode of epistaxis each year, 10% of those will seek a physician and 1% of those will need a specialist
- Can occur in all age groups

REASON FOR EXCESSIVE BLEEDING

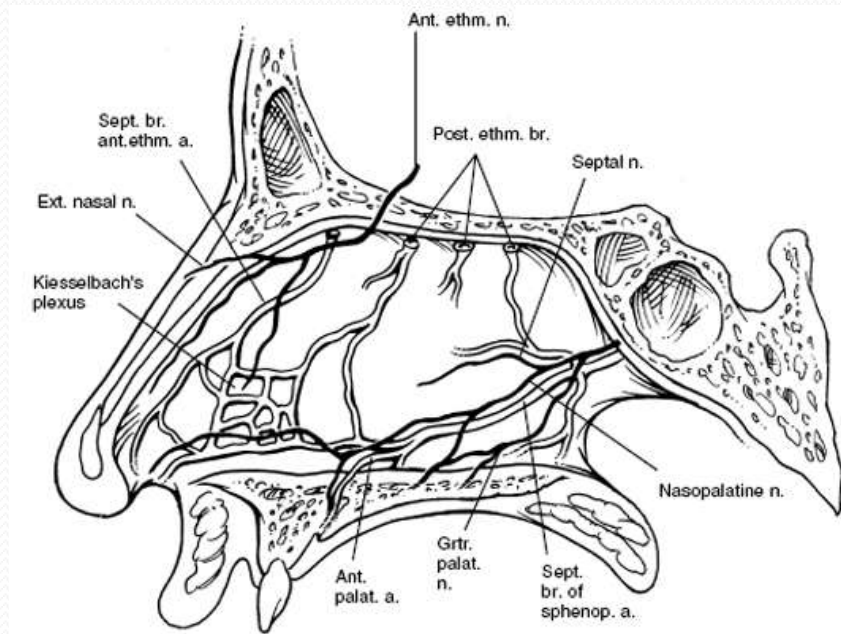
- Rich vascularity
- Supplied by both internal and external carotid system
- Various anastomoses between arteries and veins
- Blood vessels run under the mucosa unprotected
- Larger vessels on the turbinate run in bony canals – cannot contract

VASCULATURE OF NOSE

- Branches of internal carotid system :
 - . Anterior Ethmoidal artery
 - . Posterior ethmoidal artery
- Branches of external carotid system :
 - . Sphenopalatine artery- major branch
 - . Greater palatine artery
 - . Superior labial branch of facial artery
 - . Infraorbital branch of maxillary artery

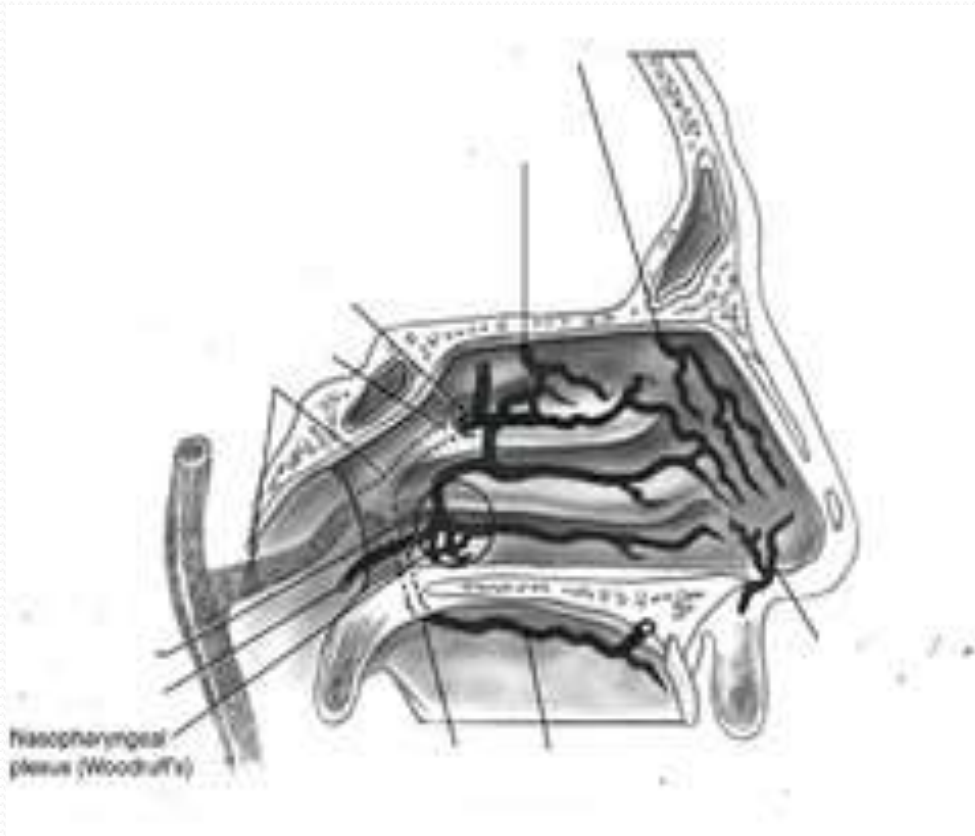


KIESSELBACH'S PLEXUS (Little's area)



- In anterior inferior part of nasal septum
 - Most common site for epistaxis
 - Mainly anterior epistaxis
1. **septal br. Of sphenopalatine**
 2. **Anterior ethmoidal**
 3. **Septal br. Of superior labial**
 4. **greater palatine arteries anastomose here**

WOODRUFF'S PLEXUS

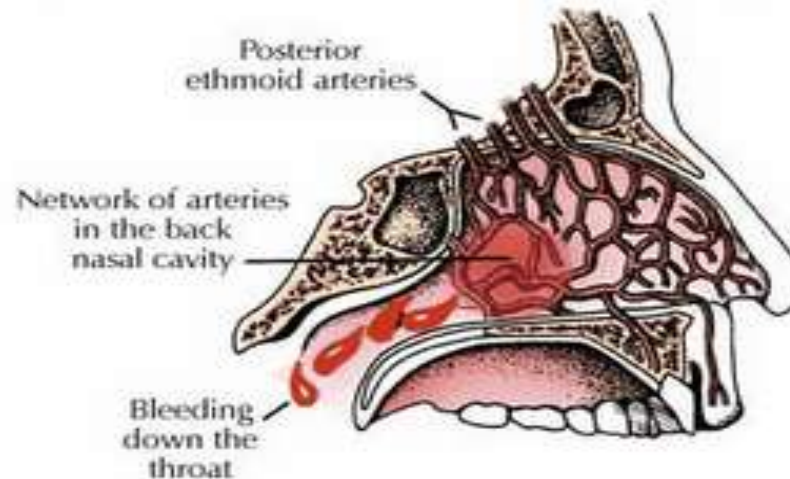
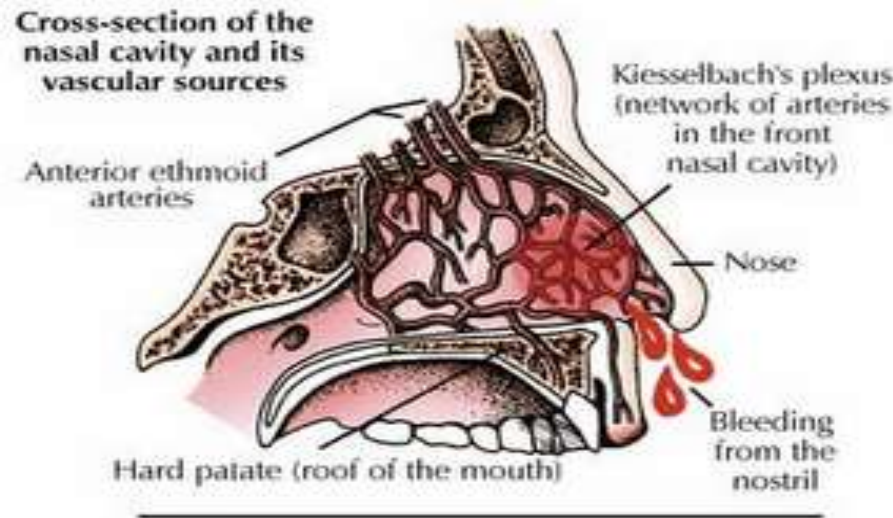


- Posterior end of middle turbinate
- Sphenopalatine artery anastomoses with posterior pharyngeal artery
- Most common site for posterior epistaxis

CLASSIFICATION

- Anterior Epistaxis

- . More common
- . Occurs in children and young adults
- . Usually due to nasal mucosal dryness
- . Alarming as bleeding seen readily but generally less severe



- Posterior Epistaxis

- . Usually older population
- . HTN and ASVD are the most common causes
- . Significant bleeding in posterior pharynx
- . More severe and treatment more challenging

LOCAL CAUSES OF EPISTAXIS

A. Congenital – Hereditary telangiectasia

B. Trauma

- . Nose picking
- . Facial and skull bone fractures
- . Foreign body
- . Iatrogenic trauma
- . Hard blowing, violent sneeze



C. Inflammatory

- . Infective rhinitis

D. Specific

- . Acute – Diphtheria
- . Chronic granulomatous- TB, Leprosy, Syphilis, Rhinosporidiasis



E. Non Specific

- . Viral – Common cold, Influenza
- . Bacterial – Secondary bacterial rhinitis sinusitis
- . Fungal rhinosinusitis
- . Atrophic rhinitis

F. Physiological

- . High altitude
- . Extreme cold or hot climate

G. Neoplastic

- . Benign – Juvenile angiofibroma, angioma of septum, capillary and cavernous hemangioma
- . Malignant – SCC, Olfactory neuroblastoma, Nasopharyngeal carcinoma

H. Miscellaneous

- . Deviated septum & spur
- . Rhinitis sicca
- . Spontaneous rupture of vessels
- . Rhinolith

SYSTEMIC CAUSES

- Hypertension- commonest
- Cardiac –CCF, Mitral stenosis
- Pulmonary –COPD
- Cirrhosis – Vitamin K deficiency
- Renal –Nephritis
- Drugs – Excessive use of salicylates , anticoagulants
- Coagulopathies –
Clotting disorders
bleeding disorders
Agranulocytosis
Leukemia
Vitamin K deficiency
Exanthematous fevers
- Hormonal – Vicarious
Menstruation, endometriosis,
granuloma gravidarum
- Idiopathic Causes

PATIENT HISTORY

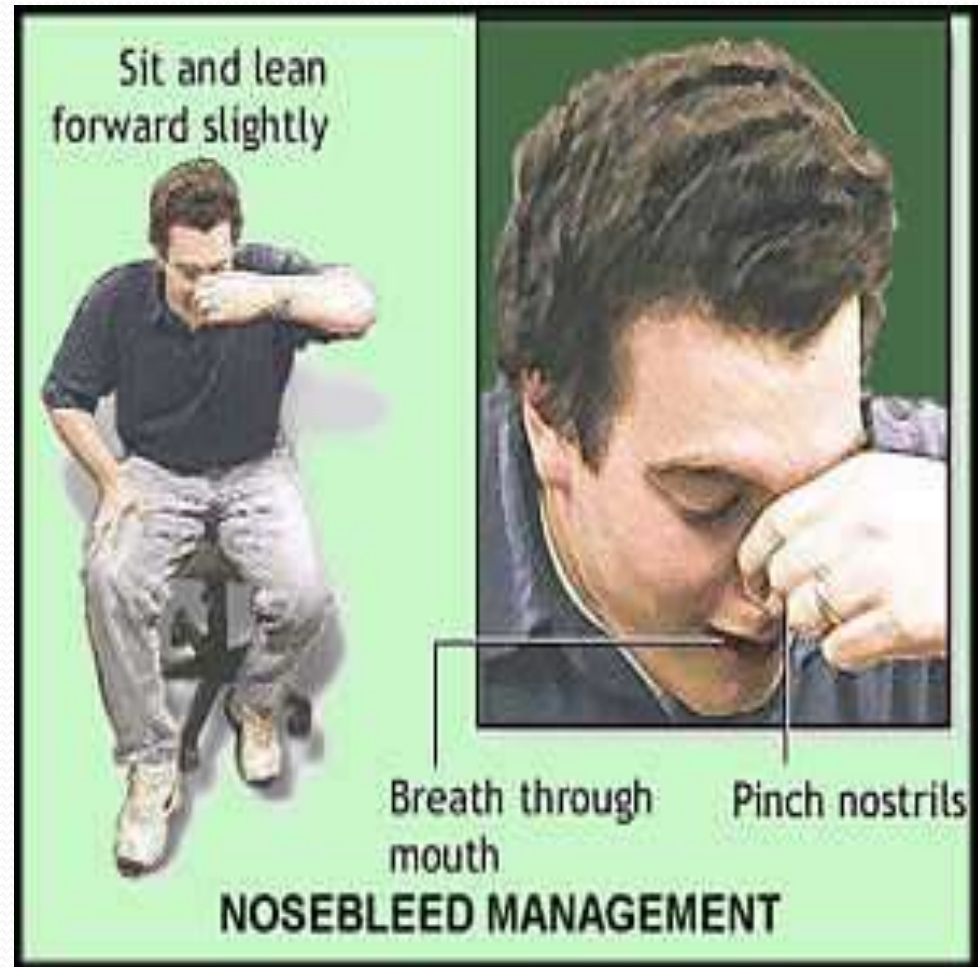
- Previous bleeding episodes
- Onset, duration, frequency, amount of blood loss
- h/o trauma
- Family history of bleeding
- Hypertension
- Hepatic diseases
- Drug history
- Any other medical ailment

MANAGEMENT

- Locate the bleeding site
- Anterior and Posterior rhinoscopy
- Diagnostic Nasal Endoscopy
- INVESTIGATIONS :
 - . Hematological investigations – Hb%, TLC, DLC, BT, CT, Platelet count, prothrombin time
 - . Blood urea, liver function tests
 - . Radiology – x-ray and CT scan of nose, PNS and nasopharynx
 - . Other investigations depending upon the possible cause

TREATMENT OF EPISTAXIS

- First aid
 - . ABC
 - . Trotter's method-
Make patient sit up,
pinch the nose for 5-10
minutes. Head bent
forward. Open mouth
and breathe
 - . Ice packs



DEFINITIVE TREATMENT

- CAUTERIZATION

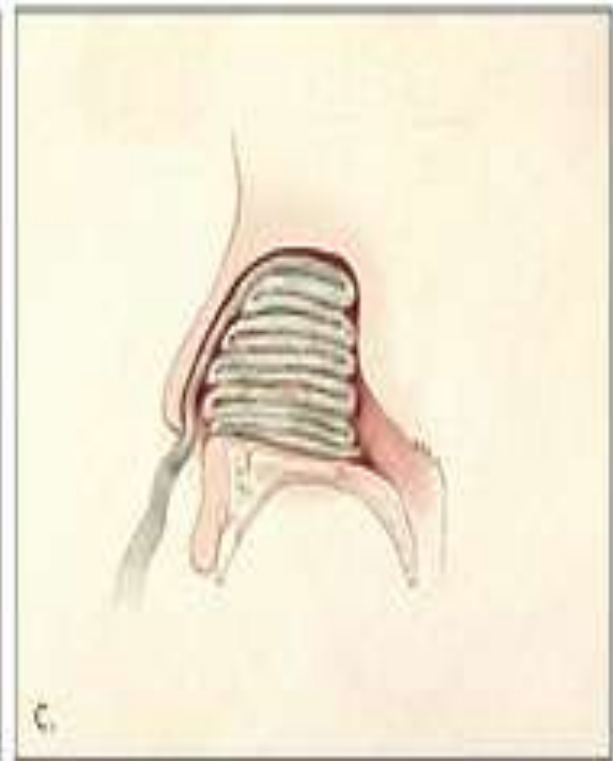
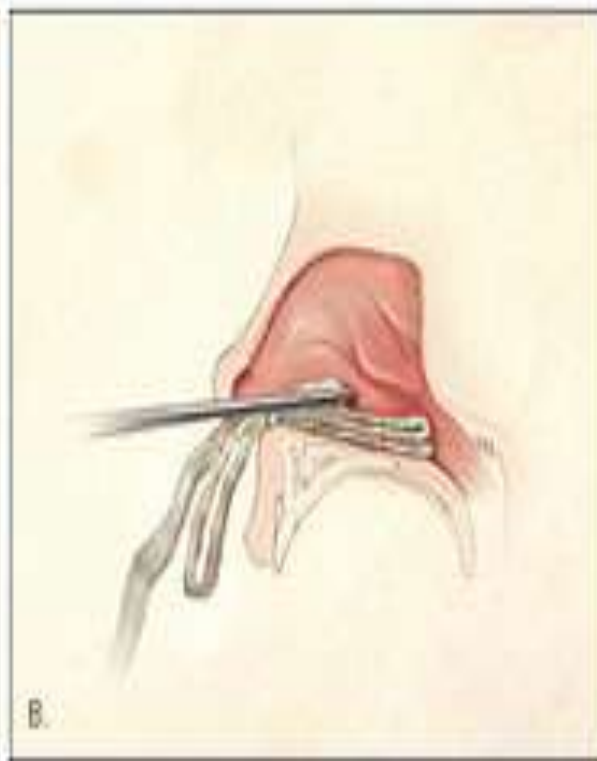
- . Chemical cautery with Silver nitrate sticks, TCA (3%), Chromic acid bead

- . Electrocautery

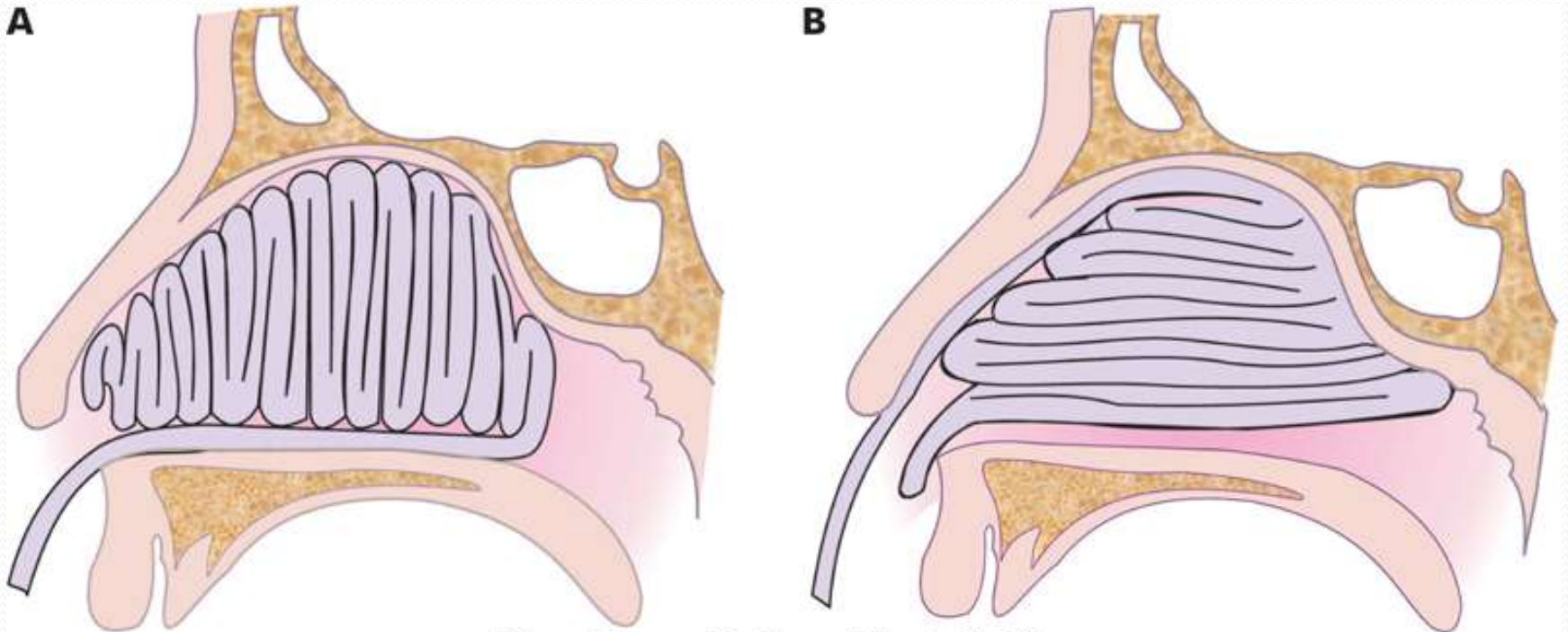
- Vasoconstrictor sprays / anesthetics

- Anterior nasal packing or anterior epistaxis balloons for refractory epistaxis

ANTERIOR NASAL PACKING

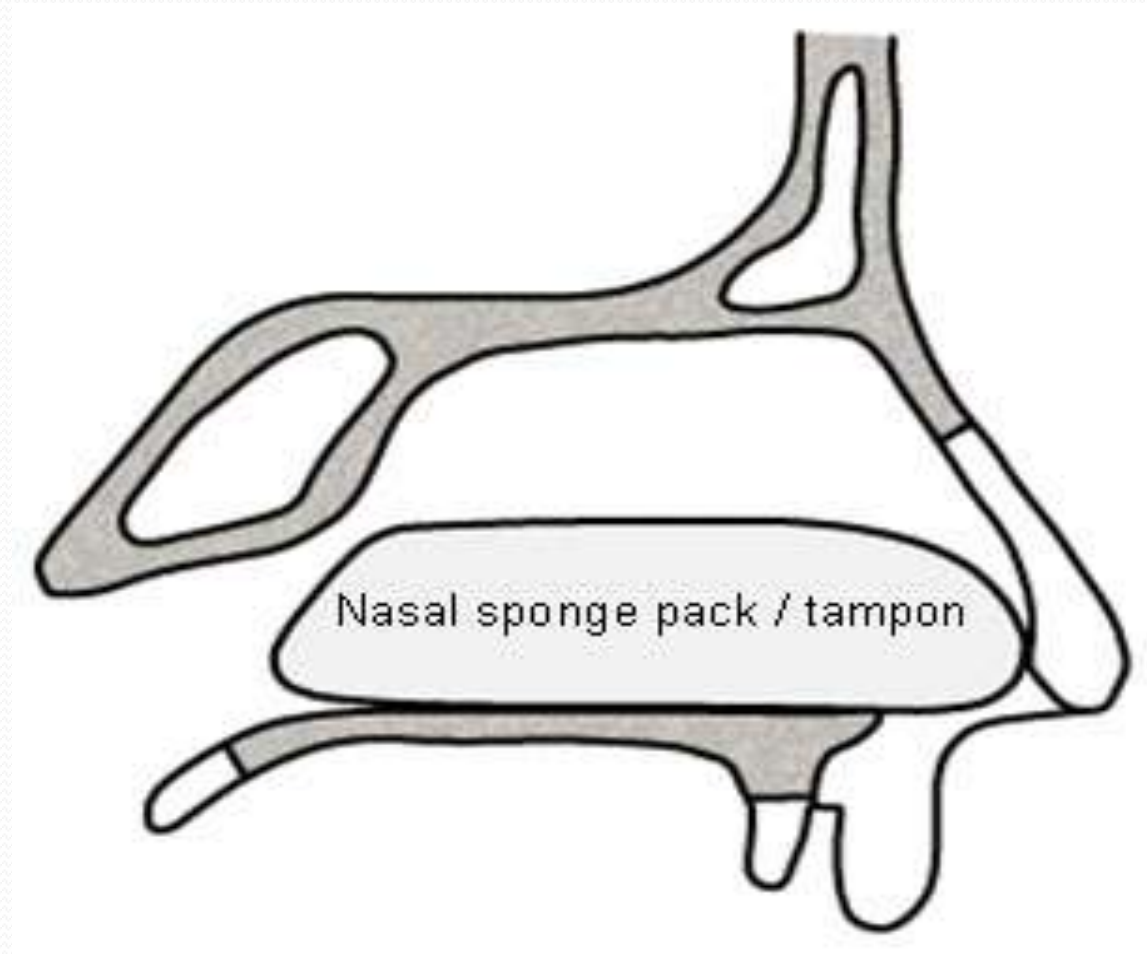


METHODS OF INSERTING ANTERIOR NASAL PACK



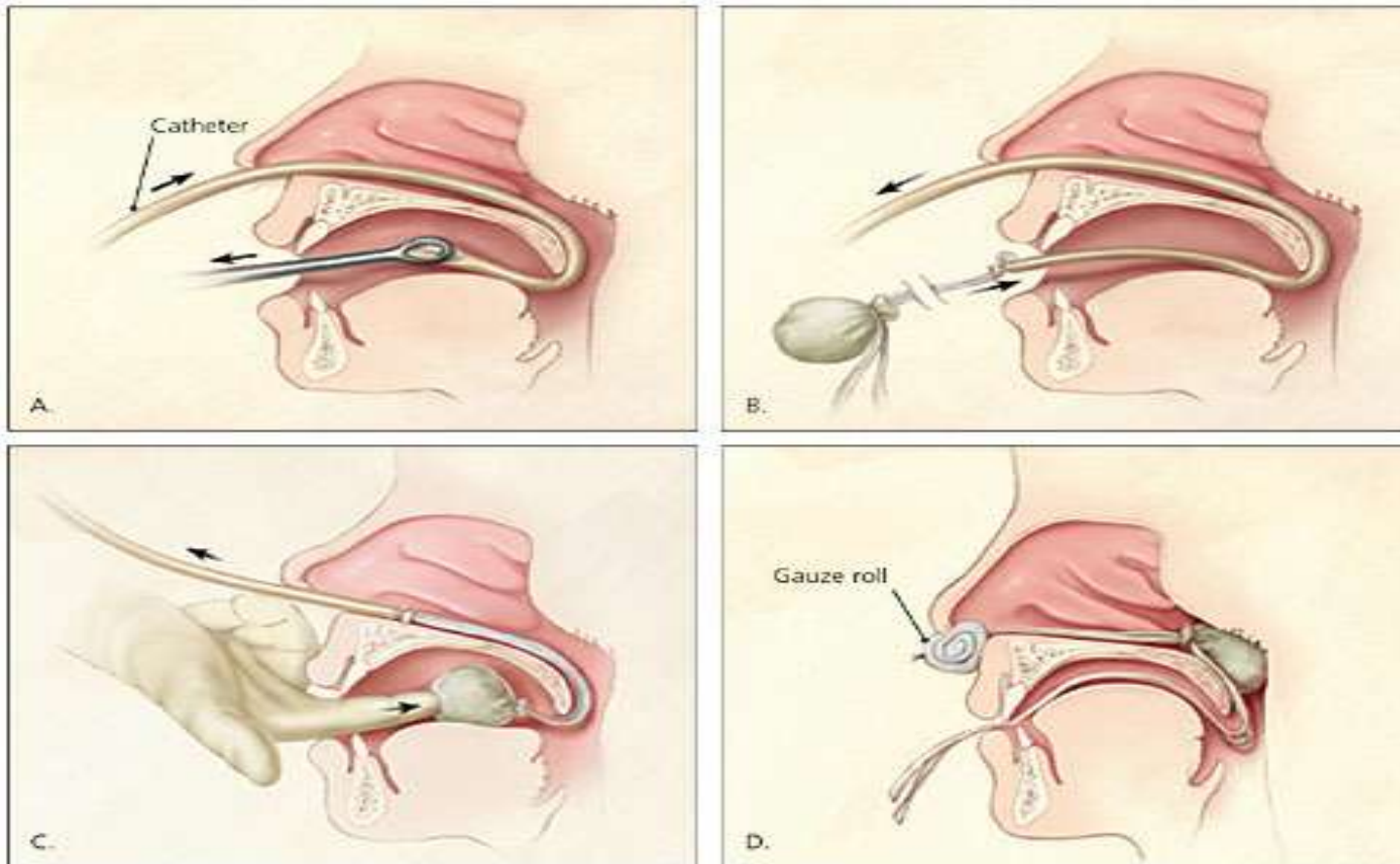
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NASAL SPONGE PACK/TAMPON

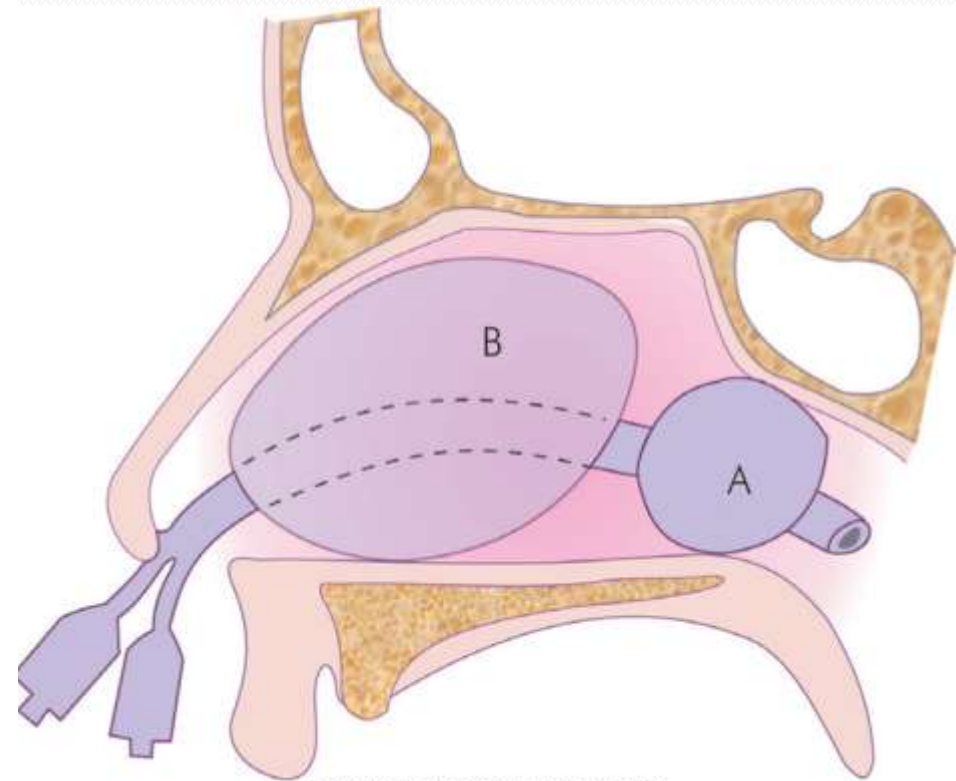
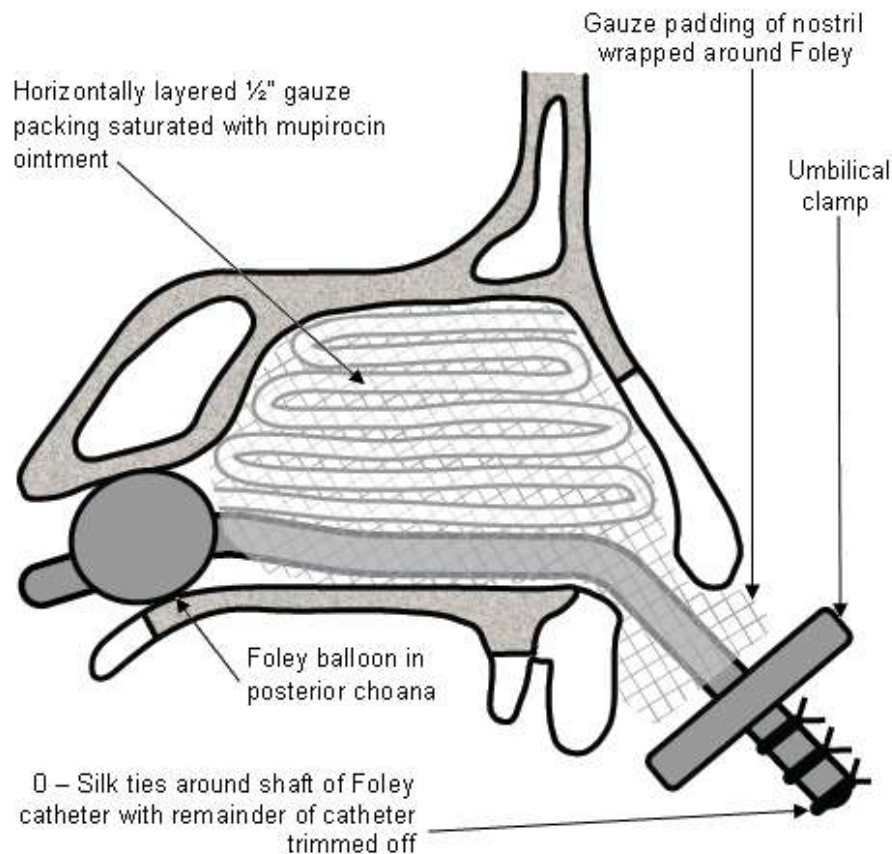


POSTERIOR NASAL PACKING

- If bleeding does not stop after anterior packing
- Posterior epistaxis



FOLEY'S CATHETER and EPISTAXIS BALLOON



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COMPLICATIONS OF NASAL PACKING

- SEPTAL HAEMATOMA / ABSCESS
- SINUSITIS
- PRESSURE NECROSIS
- TOXIC SHOCK SYNDROME



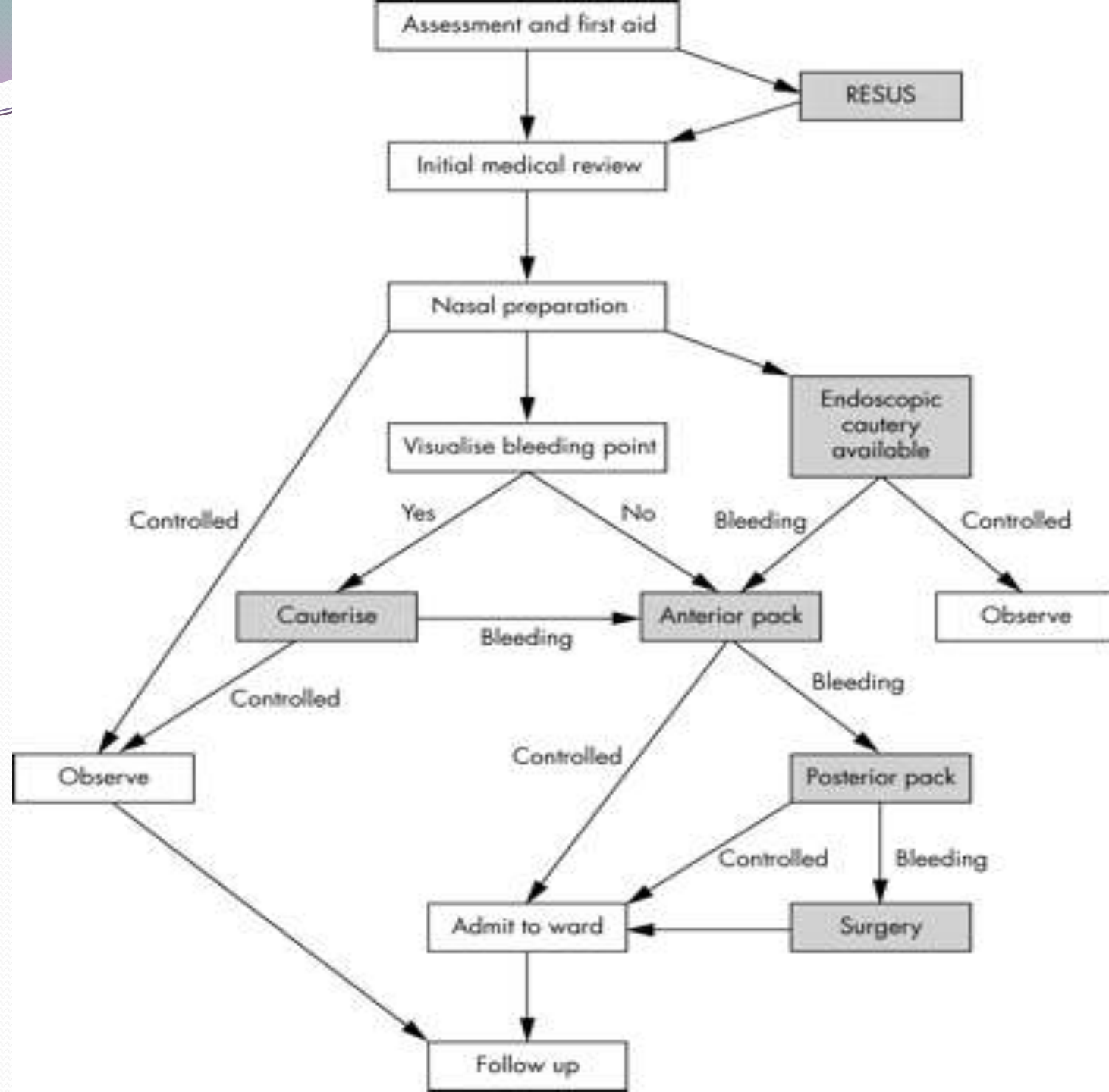
NECROSIS OF ALA

PATIENTS ON NASAL PACK

- Best to place patient on antibiotics to decrease risk of sinusitis and toxic shock syndrome
- Advise patient to avoid straining, bending forward or removing pack early
- If other nostril is unpacked advise patient topical saline spray or saline gel to moisturize nasal mucosa
- Admitted and monitored in severe cases

OTHER TREATMENTS FOR REFRACTORY EPISTAXIS

- Greater palatine foramen block
- Septoplasty
- Endoscopic cauterization
- Internal maxillary artery ligation
- Transantral sphenopalatine artery ligation
- Intraoral ligation of maxillary artery
- Anterior and posterior ethmoid artery ligation
- Selective embolisation
- External carotid artery ligation



Thank You!

