

EPISTAXIS & NASAL TRAUMA

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EPISTAXIS

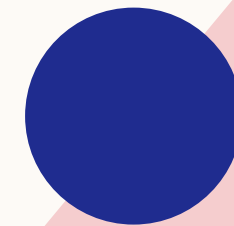
Nasal Blood Supply

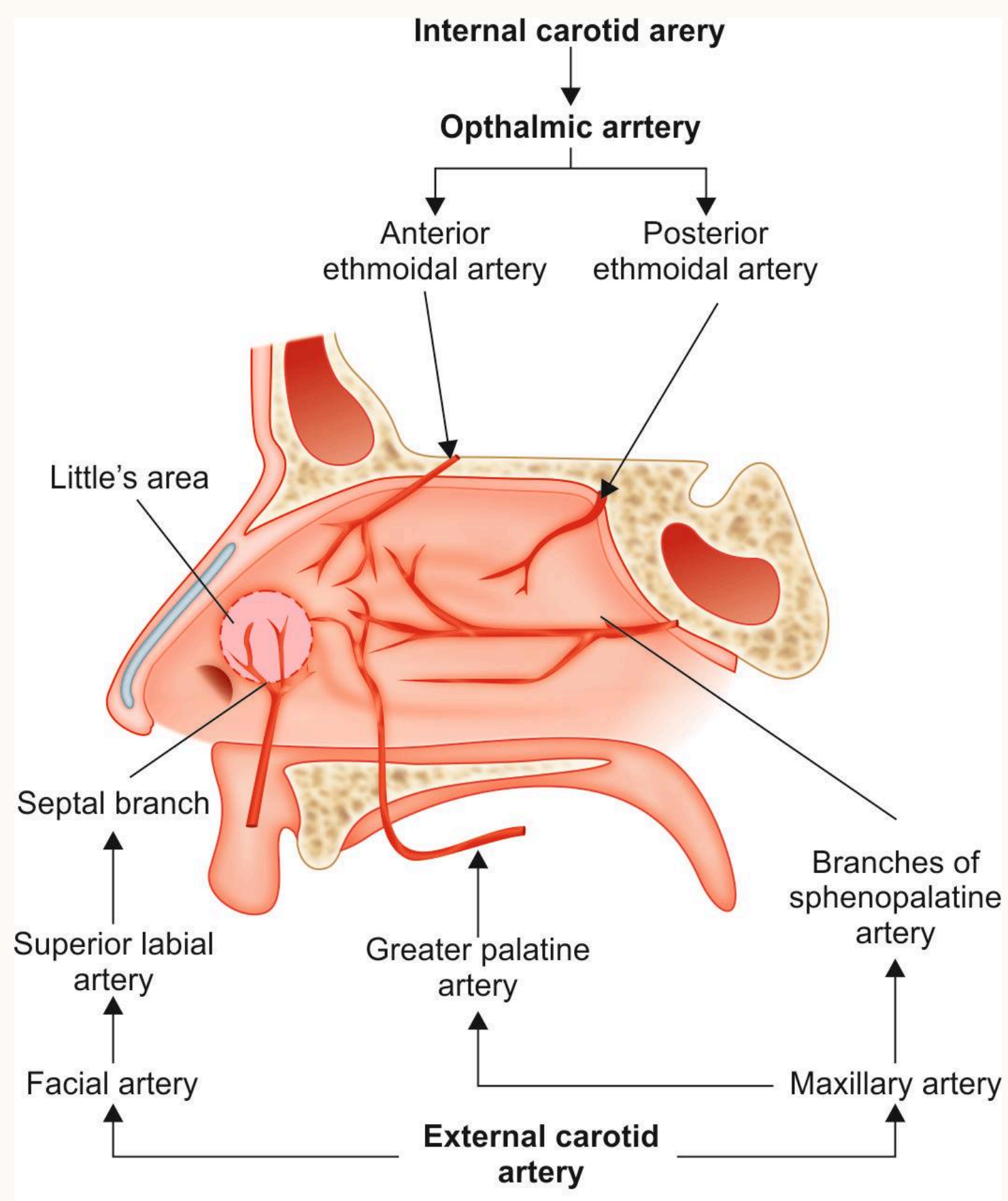
Definition & Etiology

Classification of Epistaxis

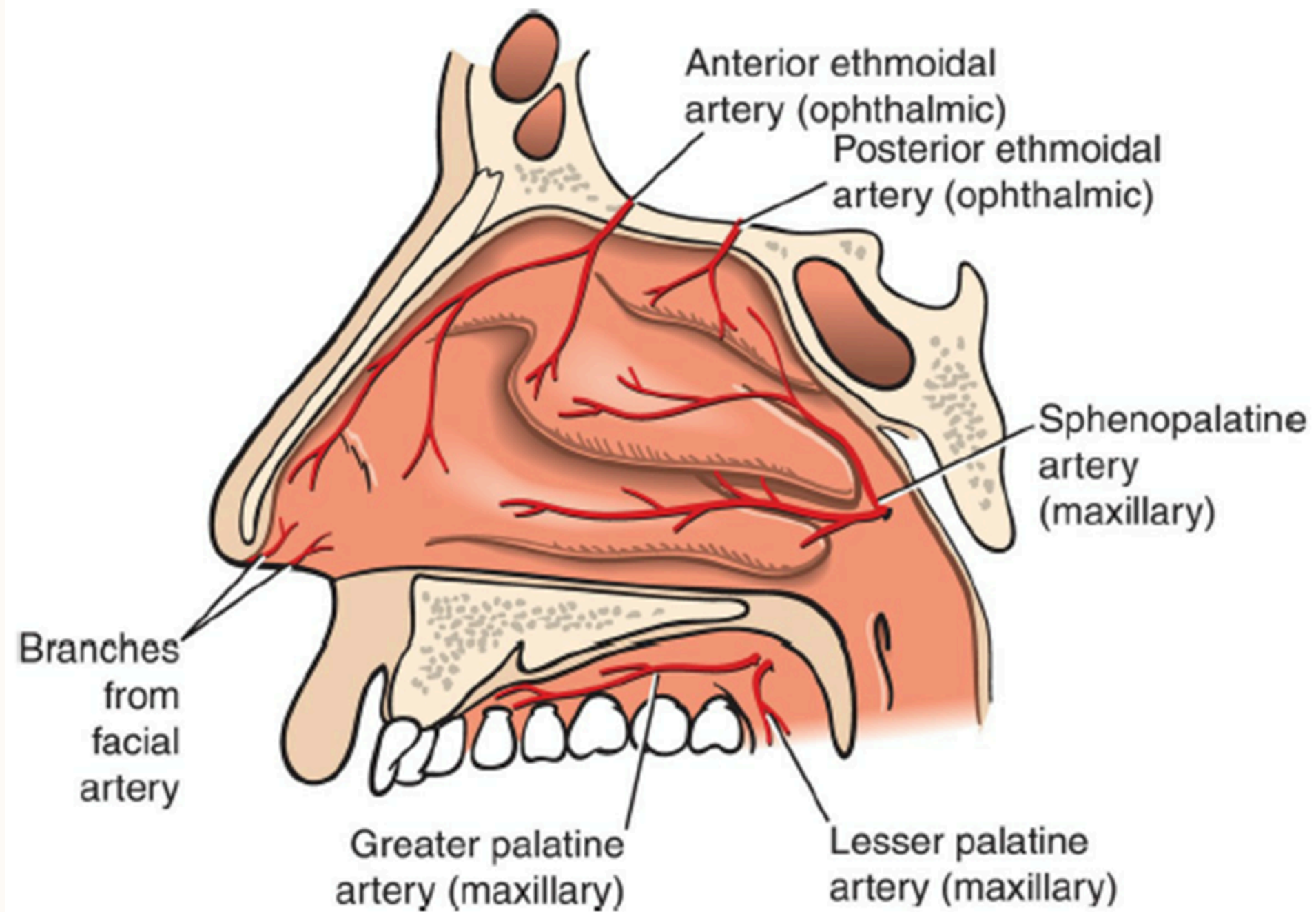
Examination

Management





NASAL SEPTUM BLOOD SUPPLY



NASAL LATERAL WALL BLOOD SUPPLY



DEFINITION

- Epistaxis is the medical term for nosebleed
- Commonly occurs in children and older adults
- Most nosebleeds are benign, self-limiting, and spontaneous, but some can be recurrent or severe.
- The life long incidence of epistaxis is 60%, however only 10% seek medical attention.
- Incidence in males > females.

ETIOLOGY

LOCAL CAUSES



LOCAL
TRAUMA



ANATOMICAL
IRREGULARITIES



INFLAMMATION



FACIAL
TRAUMA



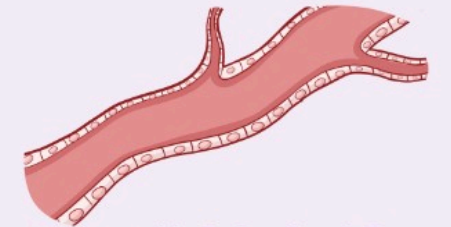
TOPICAL
NASAL SPRAYS
(incorrect/excessive use)



TUMORS
(rare)



HIGH BLOOD
PRESSURE



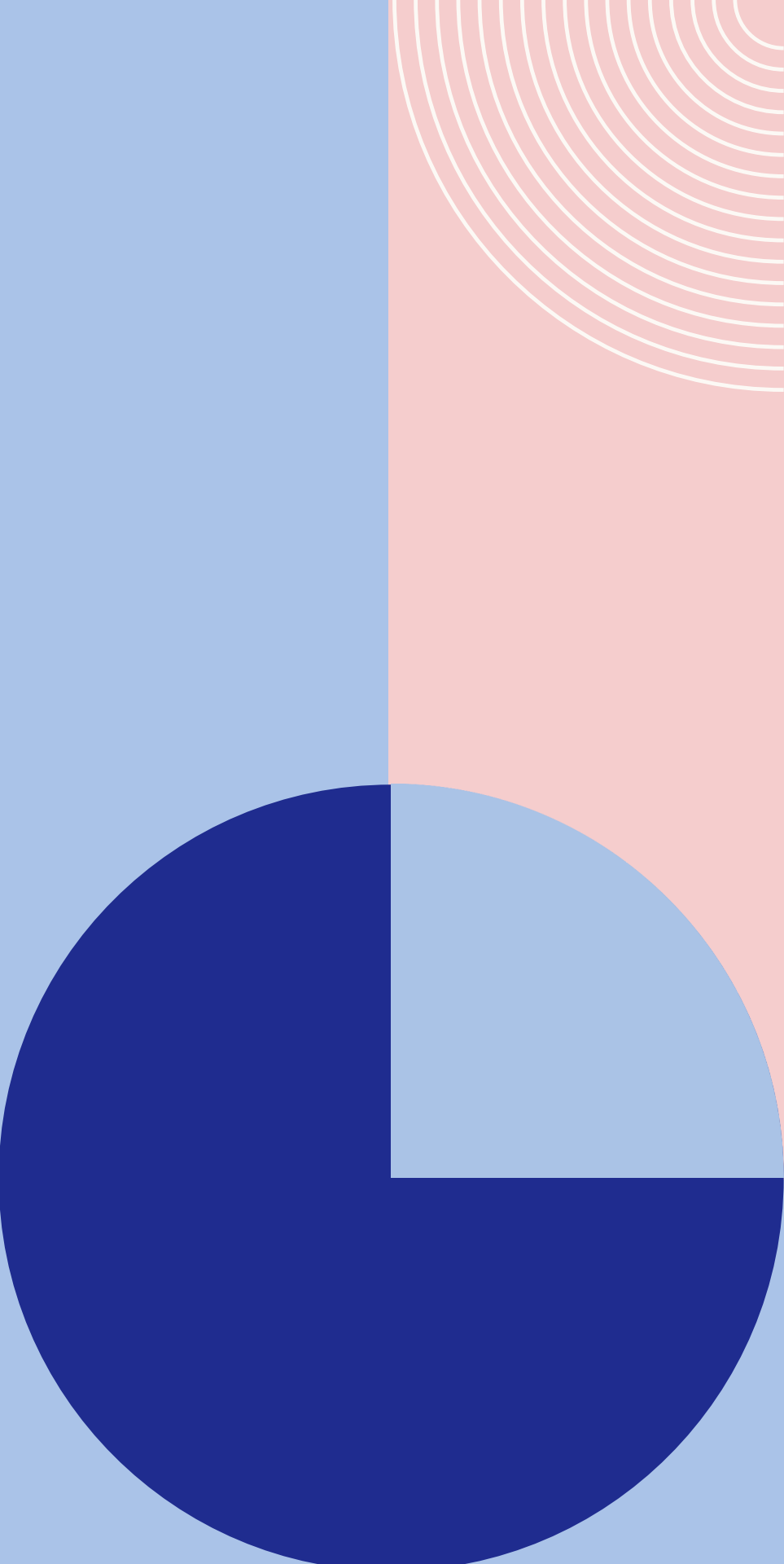
VASCULAR
MALFORMATIONS



CARDIOVASCULAR
DISEASES



BLEEDING
DISORDERS

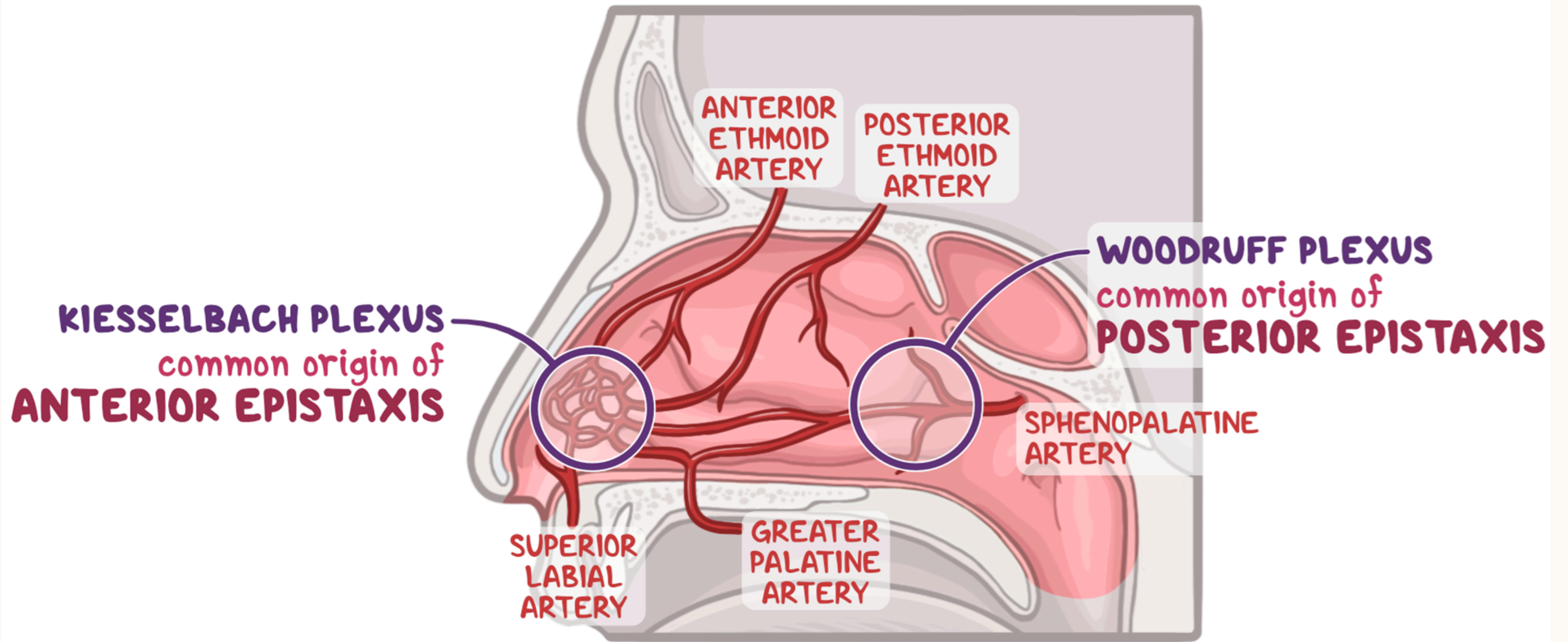


CLASSIFICATION

Criteria

Anterior epistaxis

Posterior epistaxis

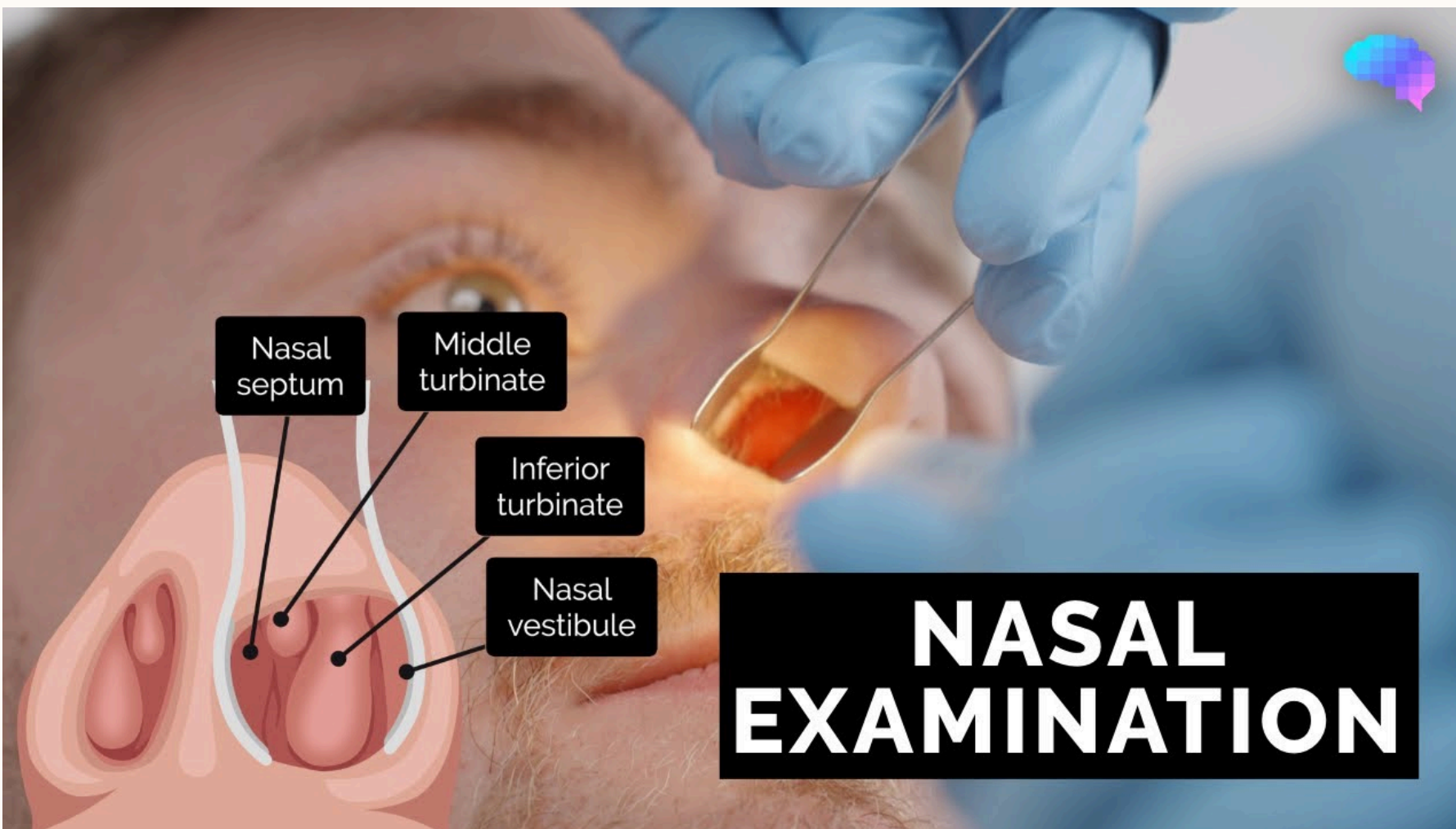


HISTORY HIGHLIGHTS

Take a quick history to estimate amount of loss.

- **History of Presenting Illness**
 - Side of bleed, anterior bleeding or posterior bleeding in the throat
 - Shortness of breath, lethargy
 - Previous episodes/surgery/trauma
- **Past Medical History**
 - HTN, blood dyscrasia, falls, heart disease
- **Drug History**
 - Aspirin, warfarin, clopidogrel, steroids
- **Social History**
 - Lives alone, distance from hospital, fit for discharge

PHYSICAL EXAM

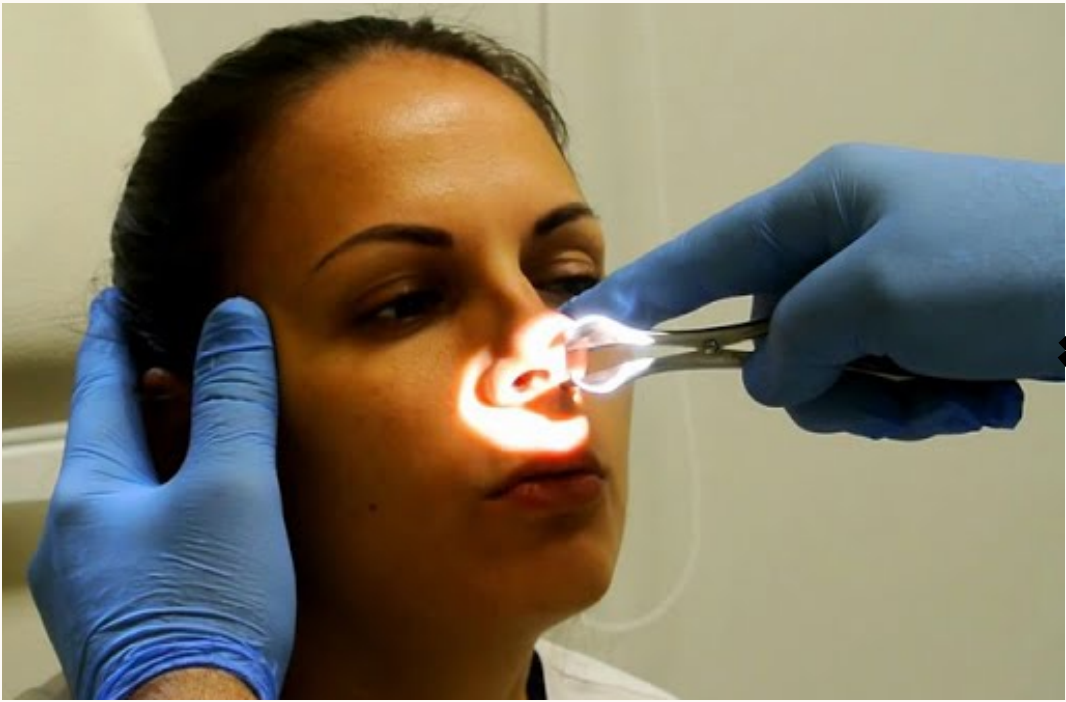
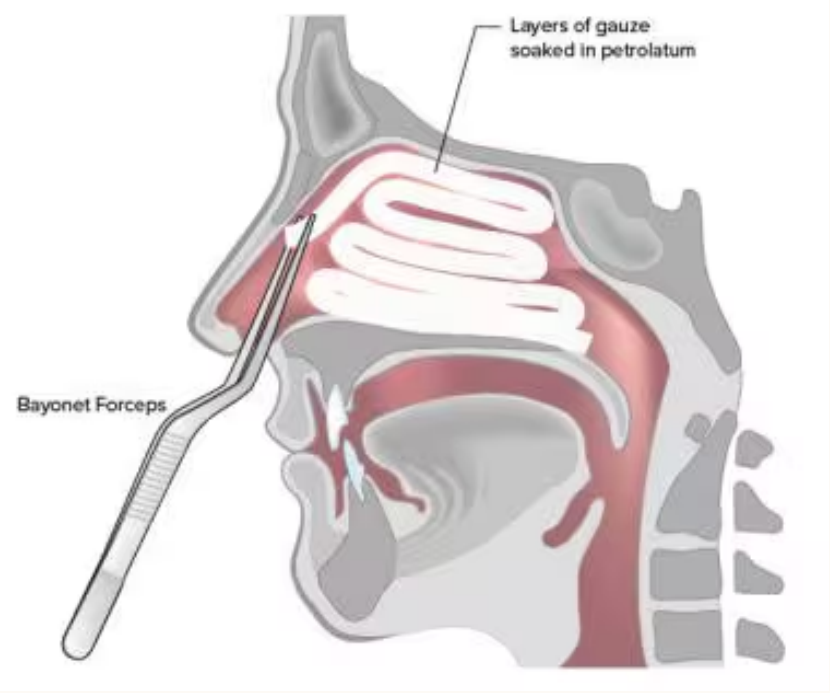


INITIAL MANAGEMENT

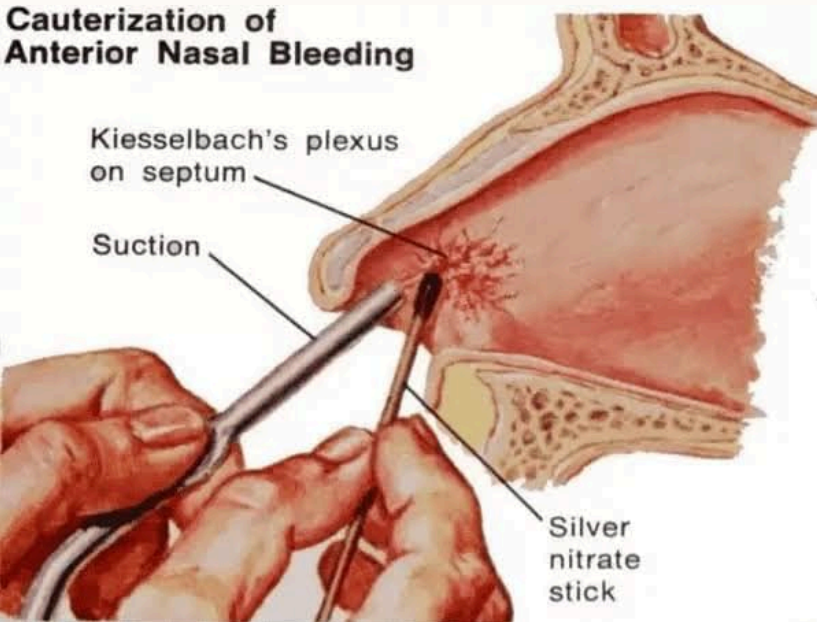
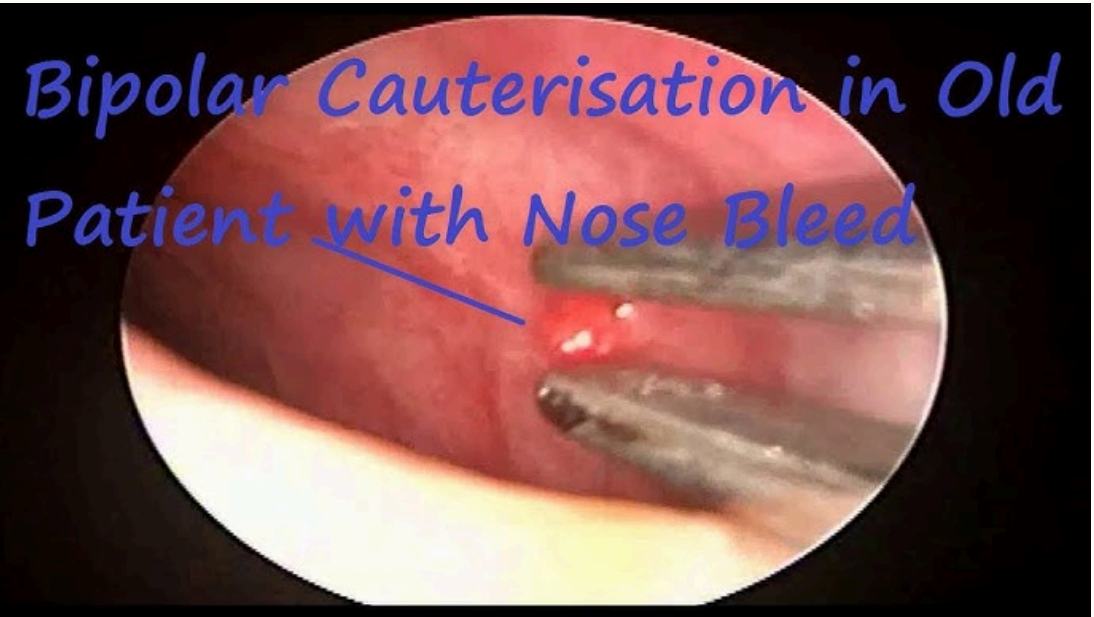
- ABC:
 - Airway: suction clots or ask patient to spit them
 - Breathing: respiratory rate, give oxygen
 - Circulation: pulse, BP, estimate blood loss, prevent further loss with compression, ice packs on forehead, back of neck
- Oxygen, IV access and fluids, FBC, crossmatch (if large amount of blood loss)
- Conservative measures for managing epistaxis:
 - Topical vasoconstrictor
 - Compression for 10-20 minutes
 - “Chin-to-chest” position (head tilted forward)



Bleeding point not visible



Bleeding point visible





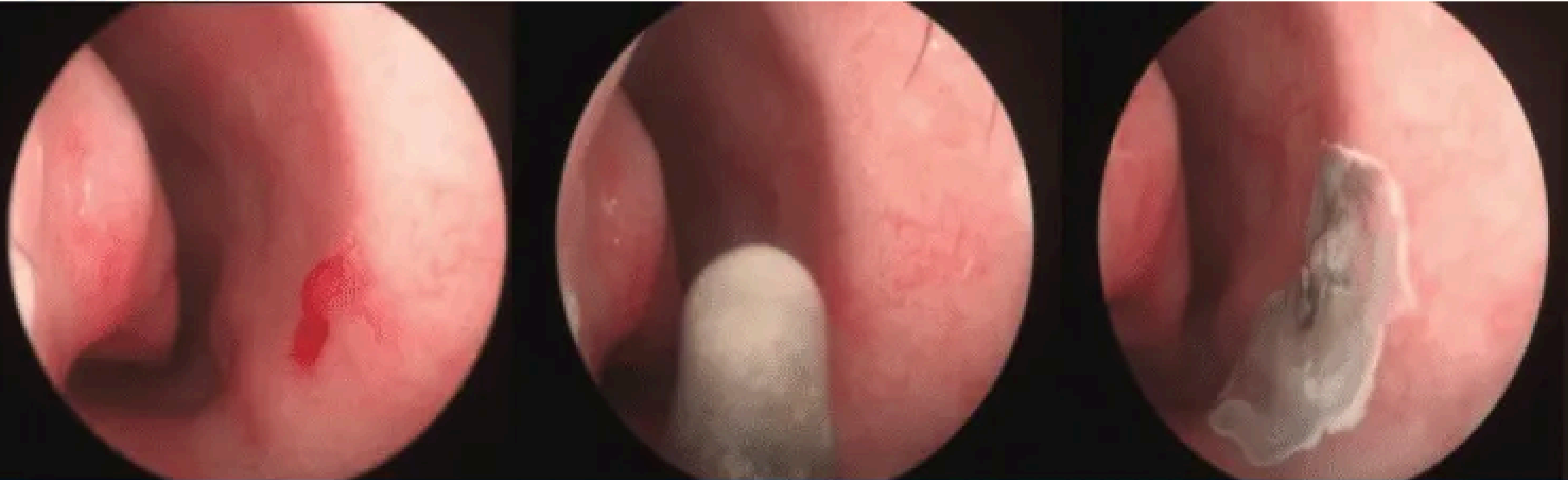
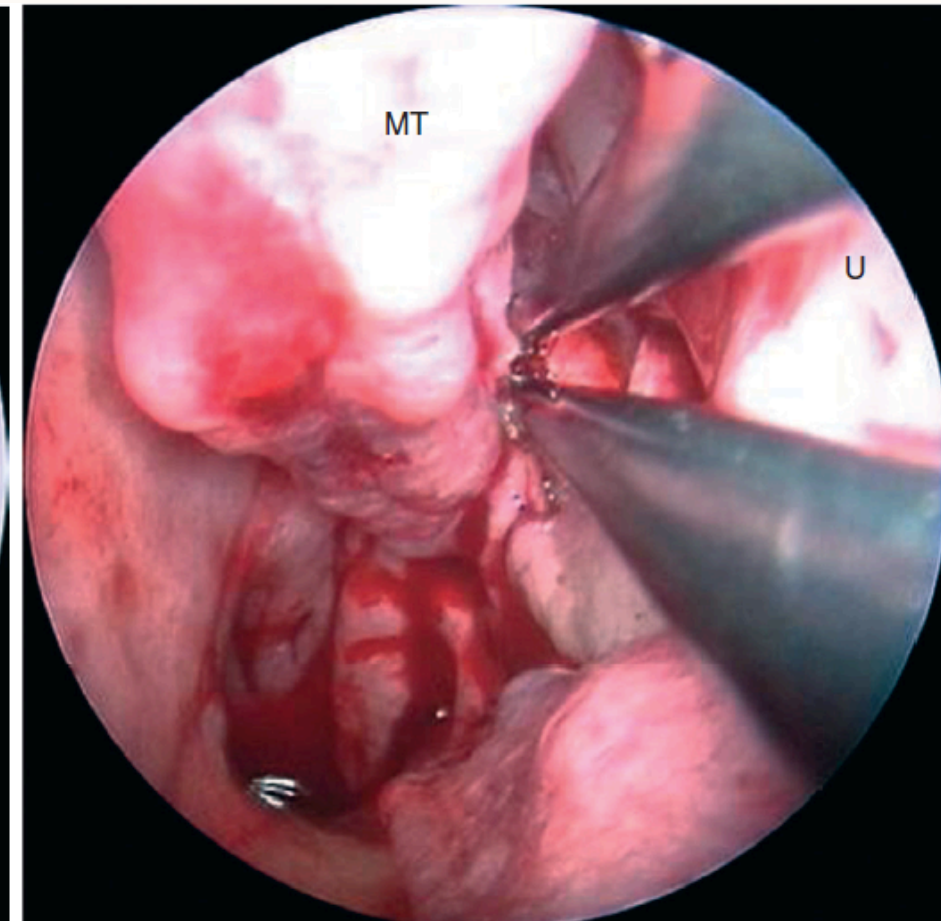
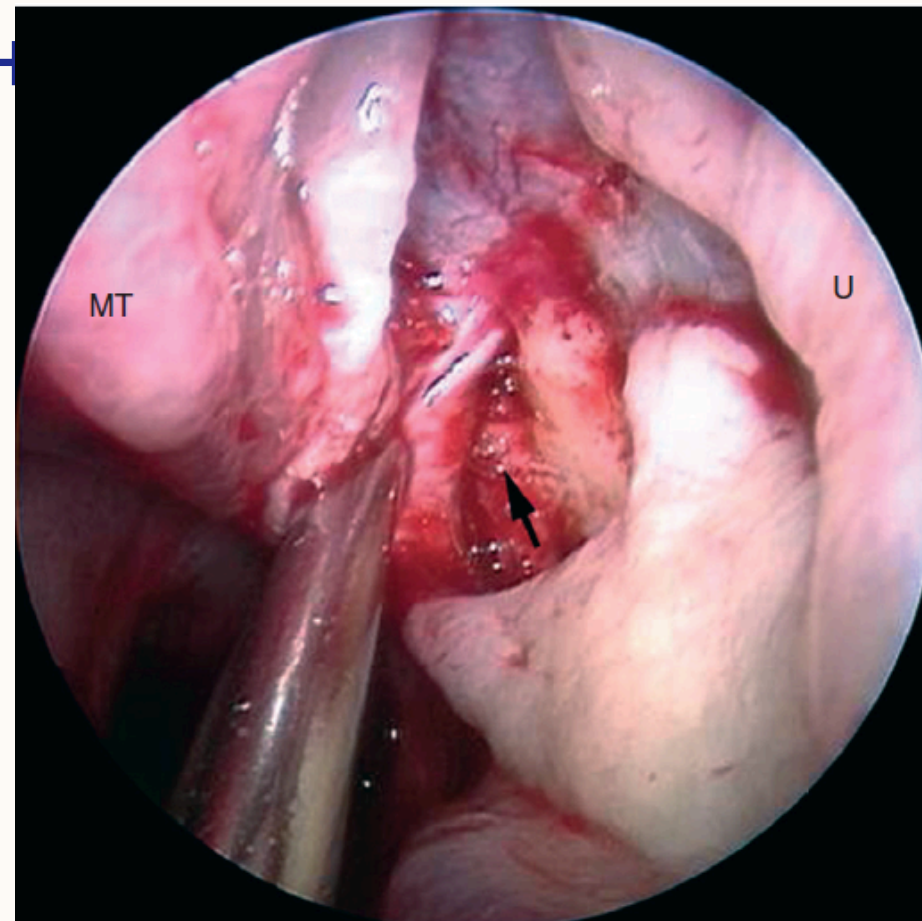


Figure 3b - 3d - Endoscopic picture of the right nasal cavity showing a bleeding vessel from the right nasal septum, application of silver nitrate stick to seal the burst vessel and appearance of the right nasal septum after silver nitrate cautery.

SURGICAL INTERVENTIONS FOR EPISTAXIS

- Examination under anesthesia + cautery/septoplasty/packing
- Arterial embolization
- Arterial ligation
 - Sphenopalatine
 - Anterior/posterior ethmoidal
 - Maxillary
 - External carotid



PREVENTATIVE MEASURES FOR EPISTAXIS

- Avoiding nasal trauma and nose picking
- Topical moisturization
- Nasal humidification
- Moisturizing creams, jelly, or ointments
- Nasal saline sprays



NASAL TRAUMA

Anatomy of the Nose

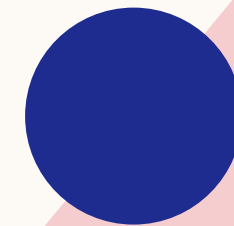
Types of Fractures

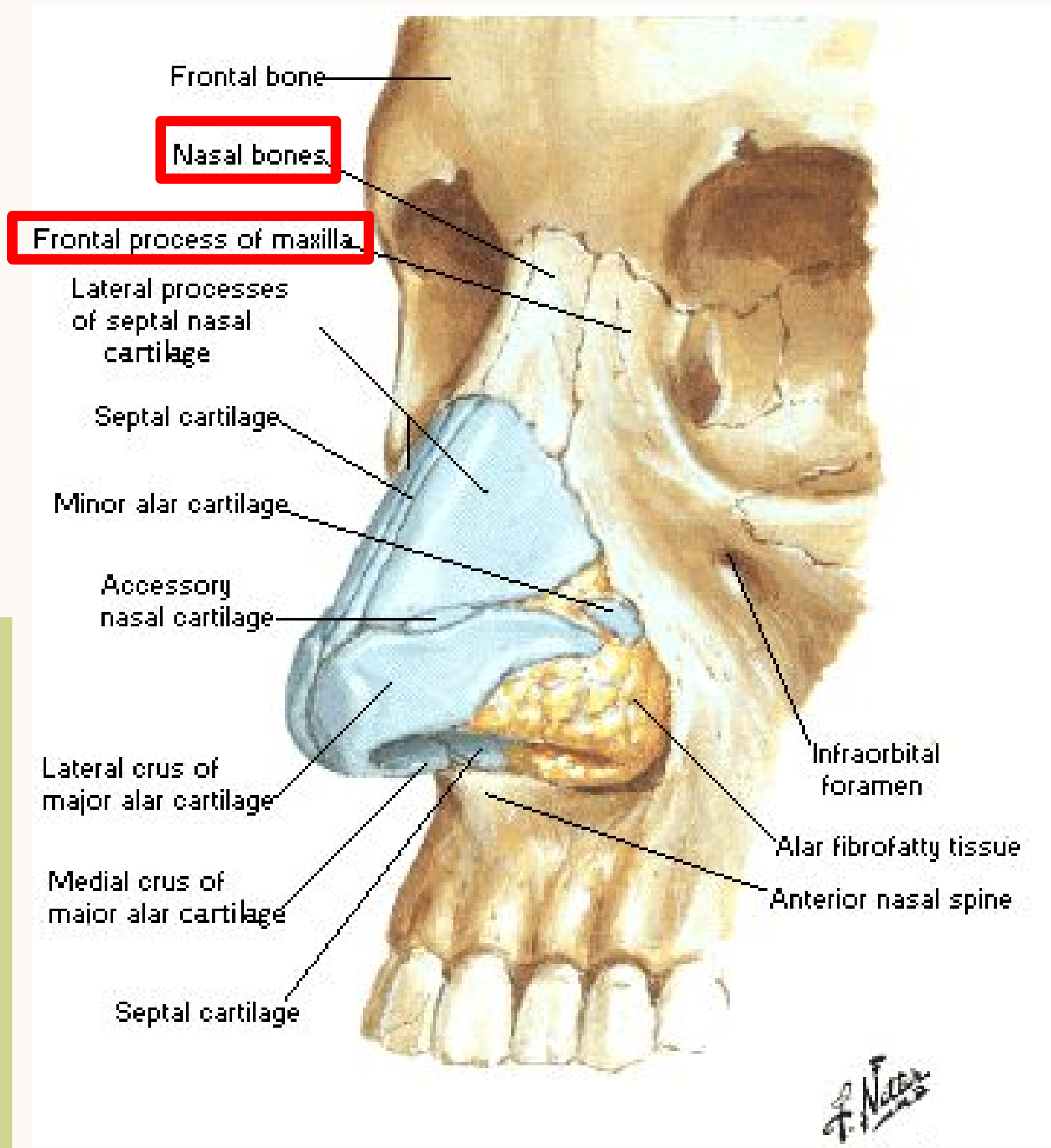
Etiology

Examination

Imaging

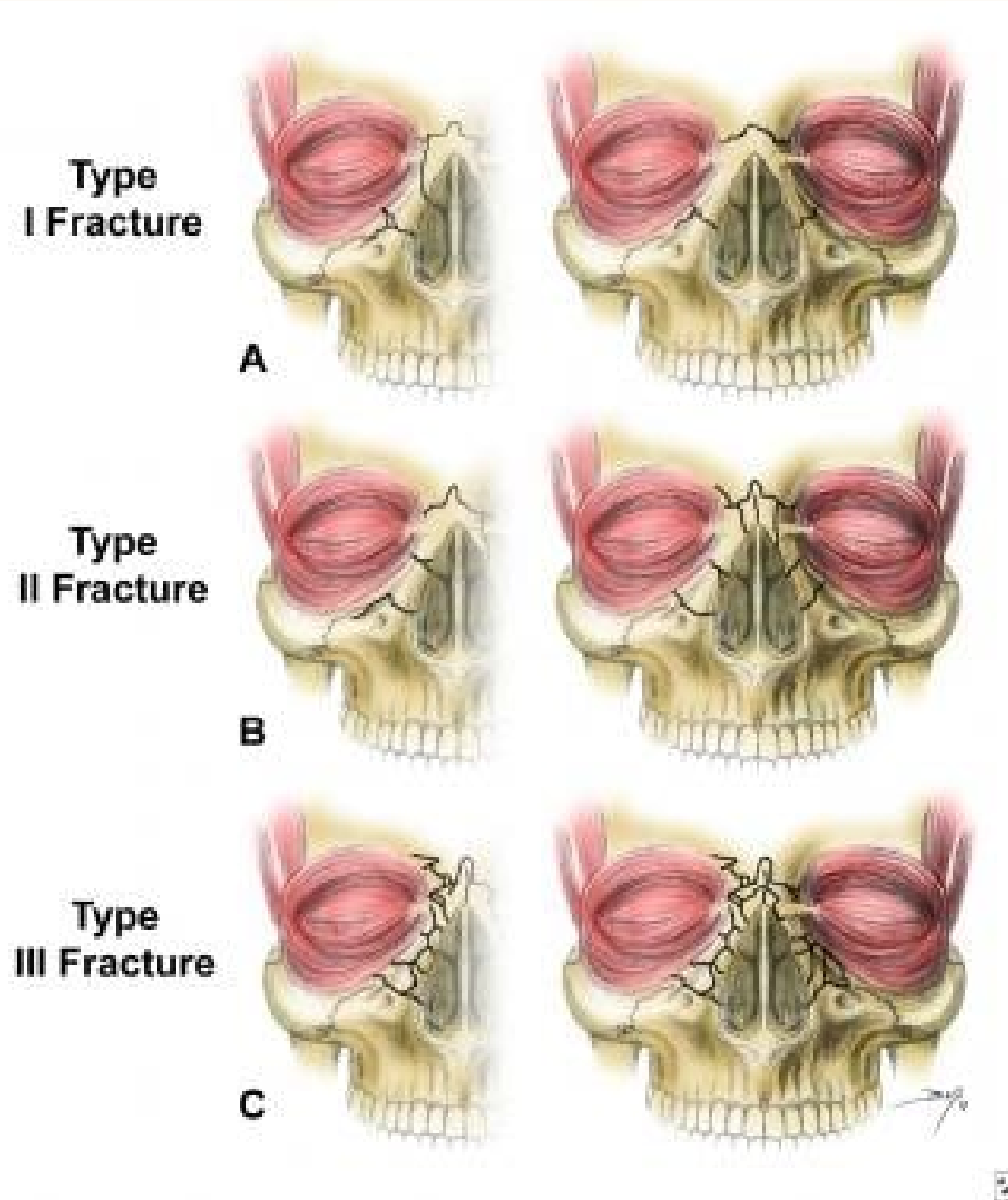
Management





ANATOMY OF THE NOSE

TYPES OF FRACTURES



Type 1 – Only 1 bone is affected (nasal bone) due to anterior trauma

Type 2 – Two bones are affected (the frontal process of maxilla and the nasal bone) due to lateral trauma

Type 3 – labyrinth of ethmoid basal skull fracture base of orbit, maxilla or mandible

ETIOLOGY

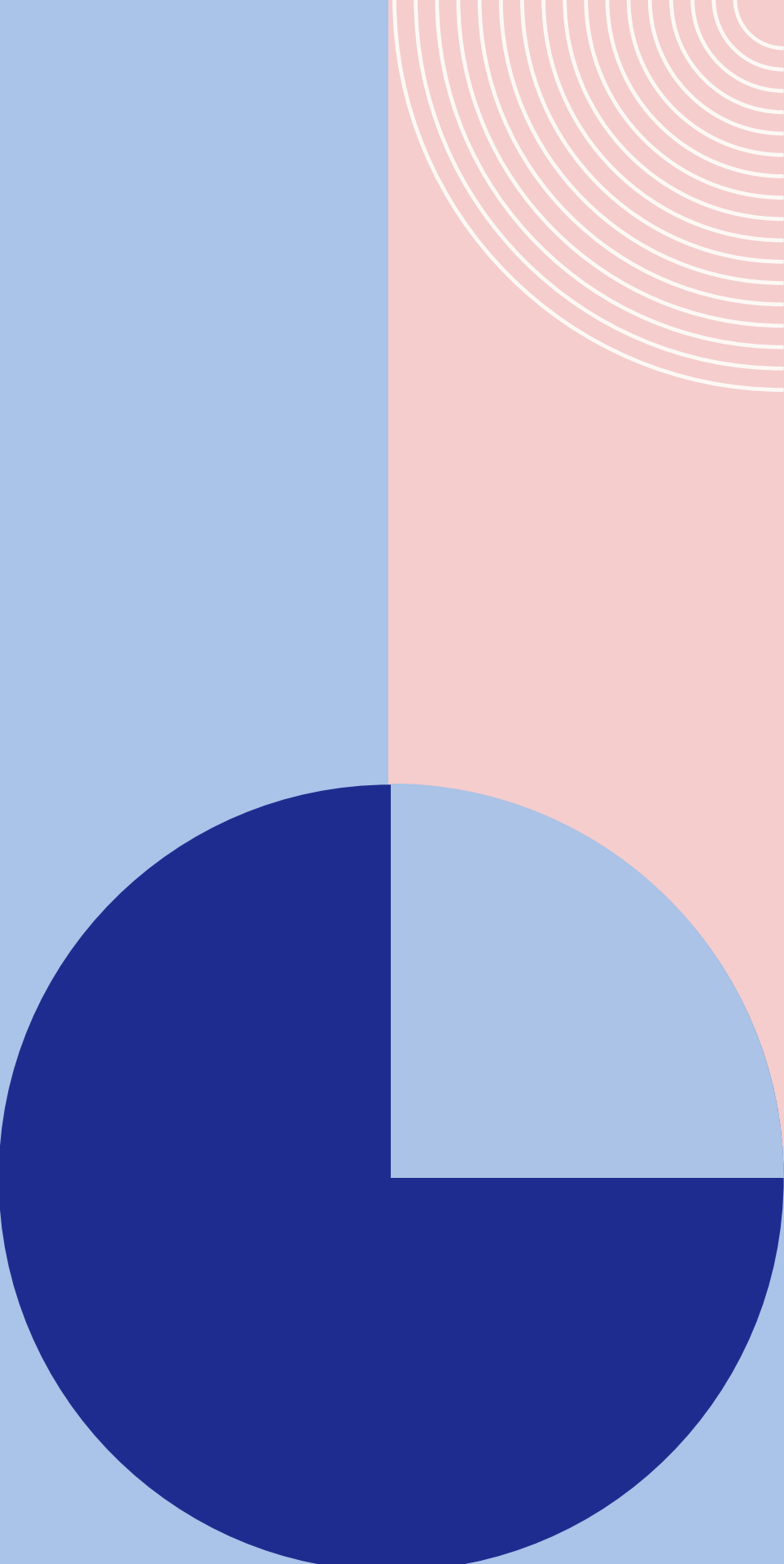


HISTORY HIGHLIGHTS

- Mechanism of injury
- Time since injury
- Deformity: cosmetic/functional?
- Associated injuries
- Prior nasal disease



Broken Nose



PHYSICAL EXAM

- External nasal exam:
 - Deformity, other associated facial injuries
 - Swelling and discoloration of the skin and subcutaneous tissue covering the nasal bones
 - Tenderness
 - Mobility of the nose
 - Crepitation
- Internal nasal exam:
 - ****Septal hematoma****
 - Septal fractures
 - CSF Rhinorrhea
- Other injuries:
 - Look for skull and chest fractures
 - Look for signs of intracranial or abdominal bleeding

IMAGING

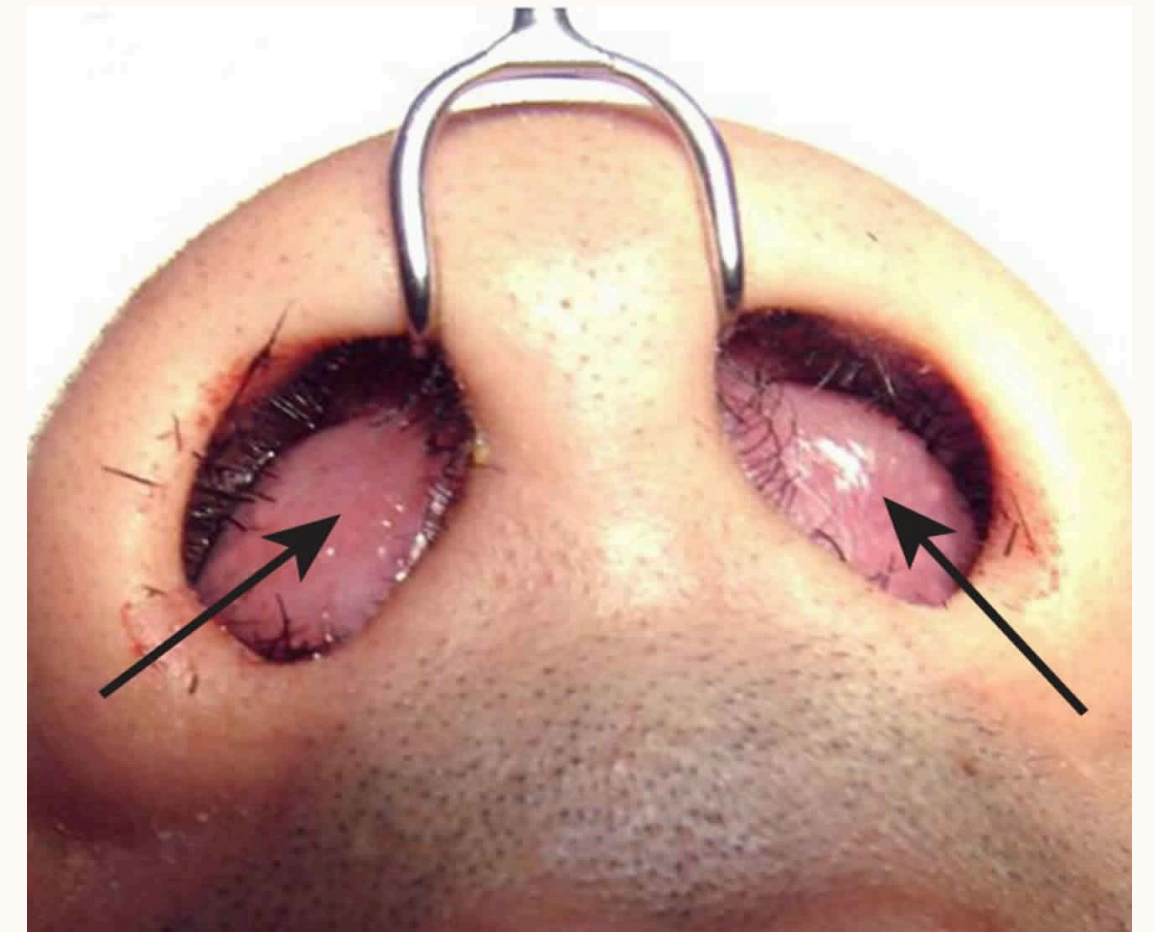
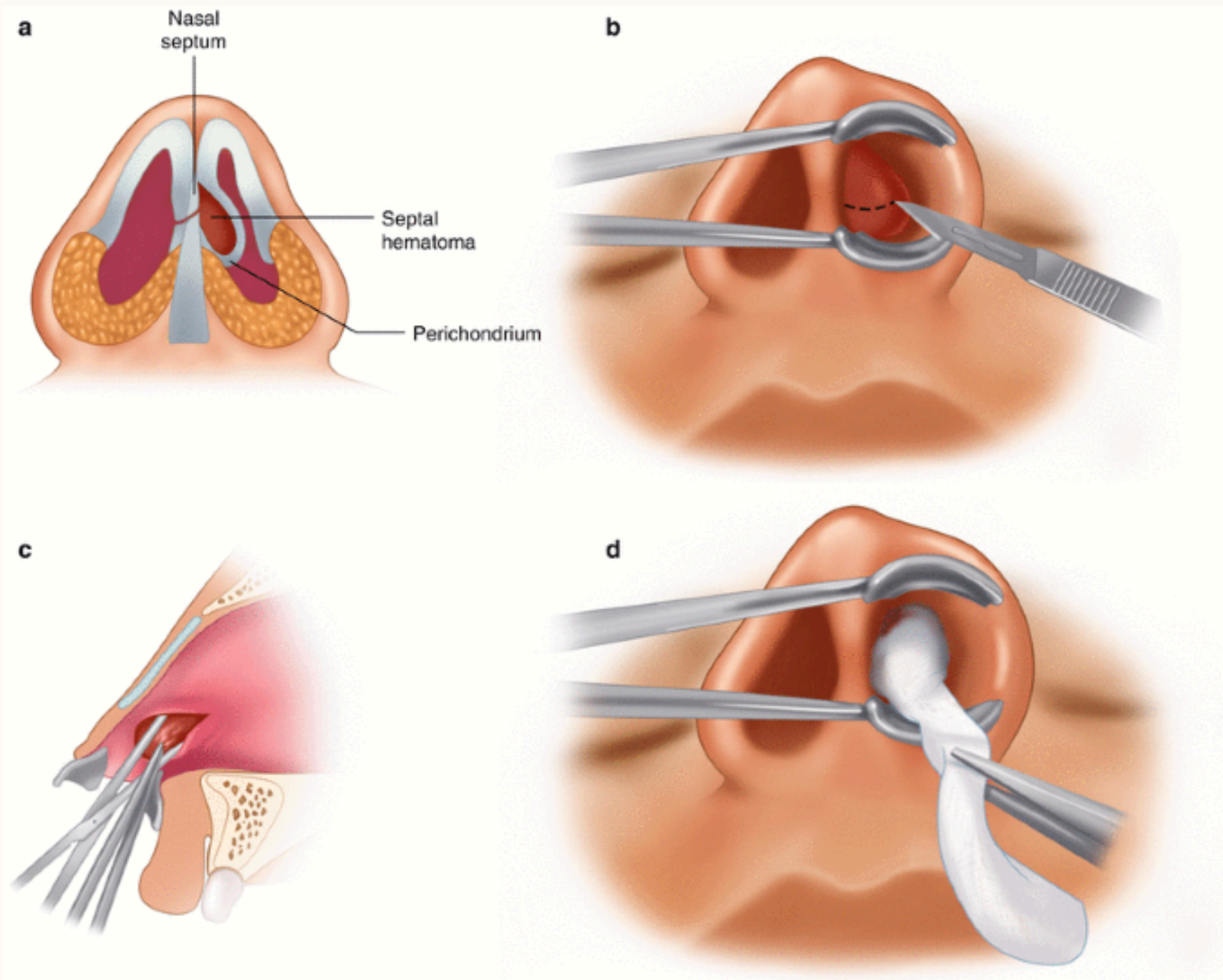
- **Xray / CT**
- None are needed since it is a clinical diagnosis unless it is part of multi-trauma assessment or for medicolegal purposes.
- CT scan may be indicated if there is:
 - Type 3 fracture
 - Fracture of other facial bones
 - Evidence of CSF leak



MANAGEMENT OF NASAL TRAUMA

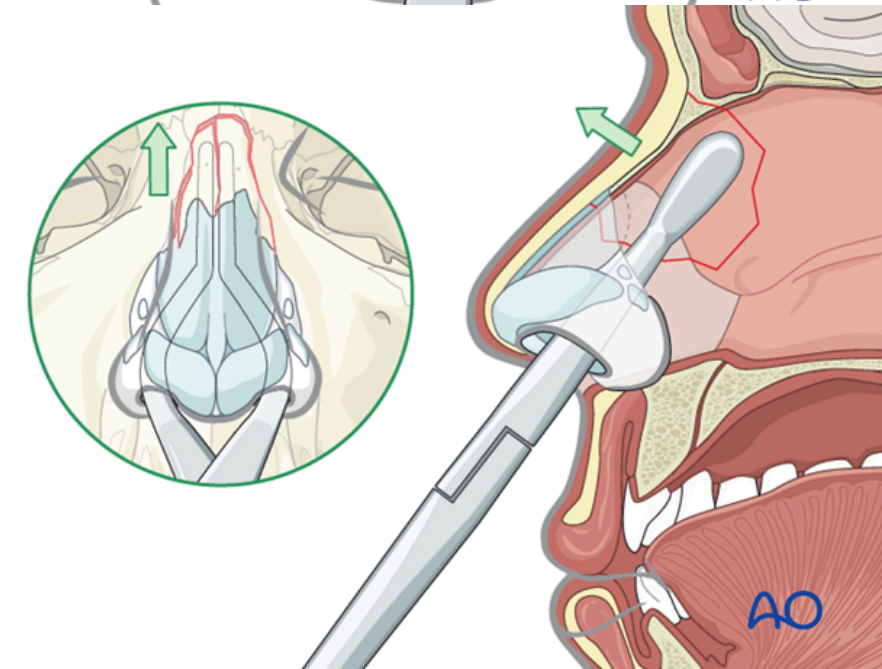
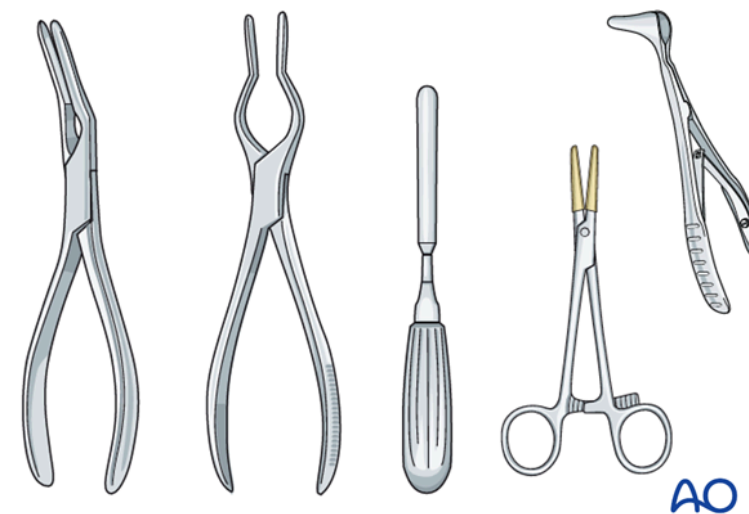
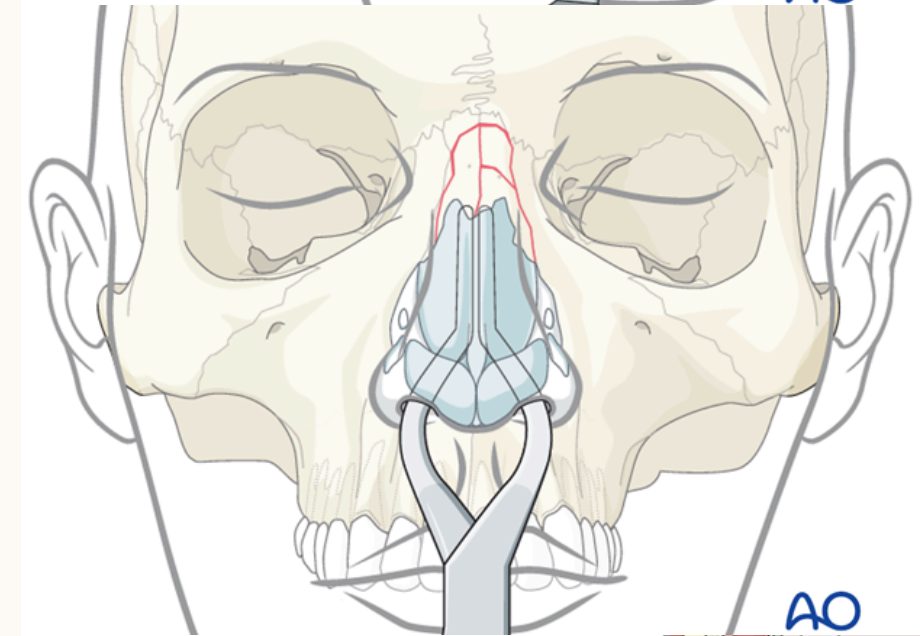
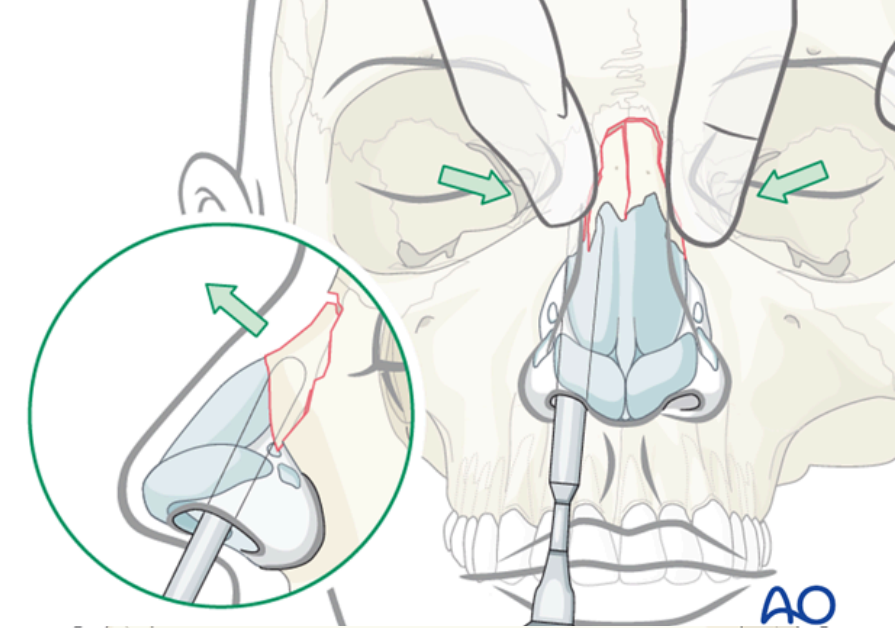
- Primary Survey
- Management of epistaxis
- Management of septal hematoma
- Management of nasal bone fracture (nasal bone reduction)

SEPTAL HEMATOMA

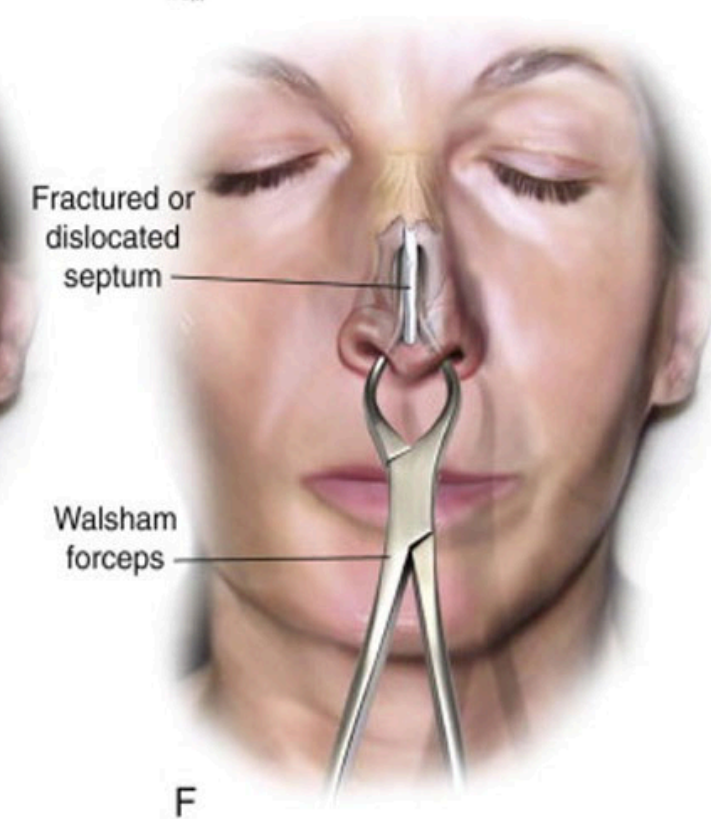
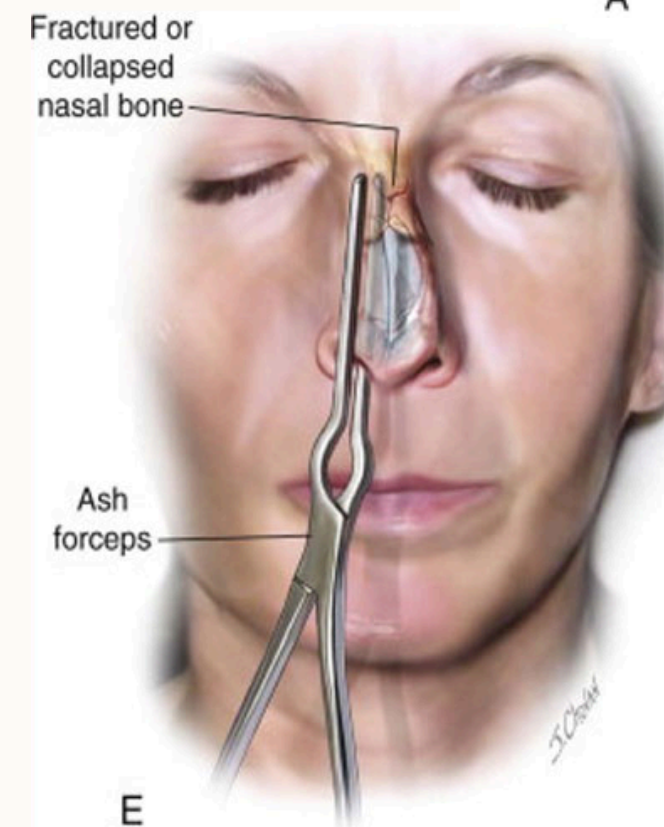
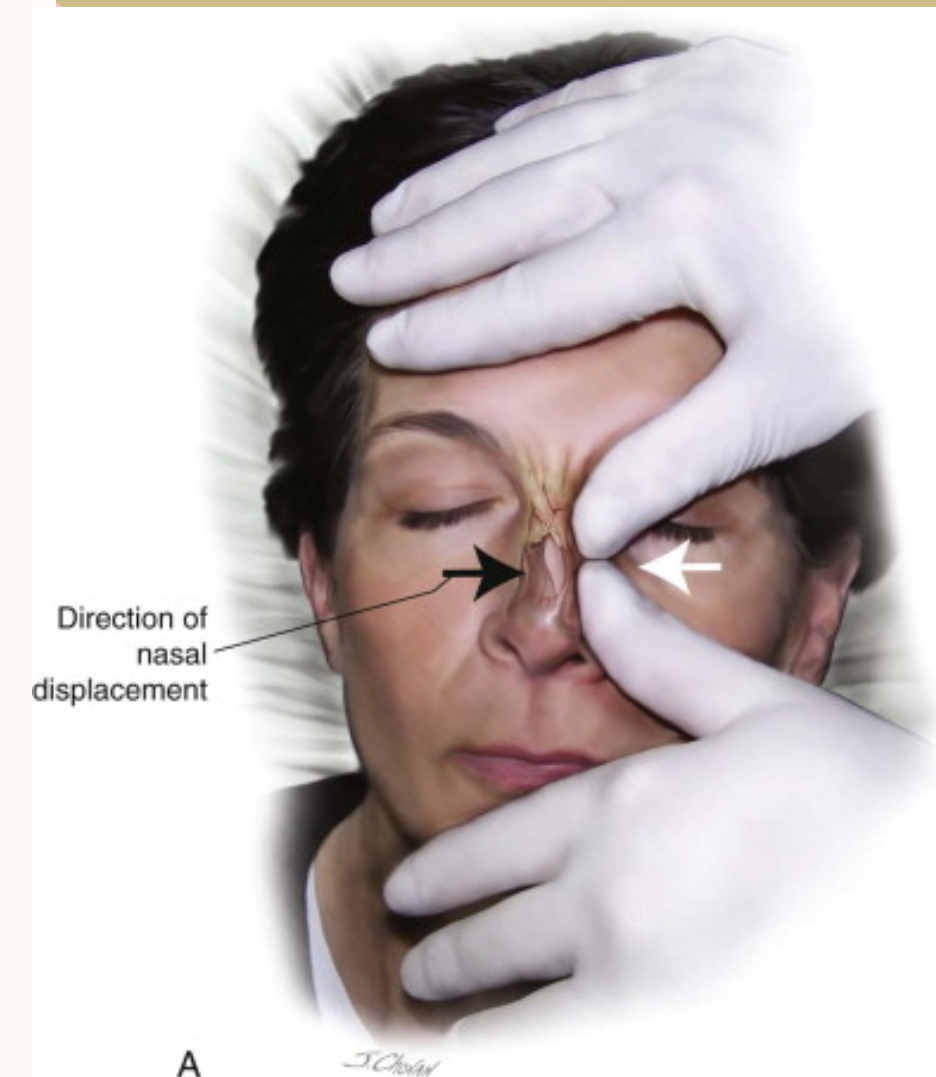


NASAL BONE REDUCTION

- Timing:
 - Within 1-2 hours of injury before edema occurs
 - 1 week after trauma (when edema resolves)
 - Children: within 4 days
 - Not after 14 days
- Local anesthesia vs general anesthe
- Open vs Closed Reduction
- +/- - Septoplasty



NASAL BONE REDUCTION





THANK YOU