

Lecture IV

Sources:

Dr. SAMI ALHARETHY's LECTURE
429 ENT TEAM.

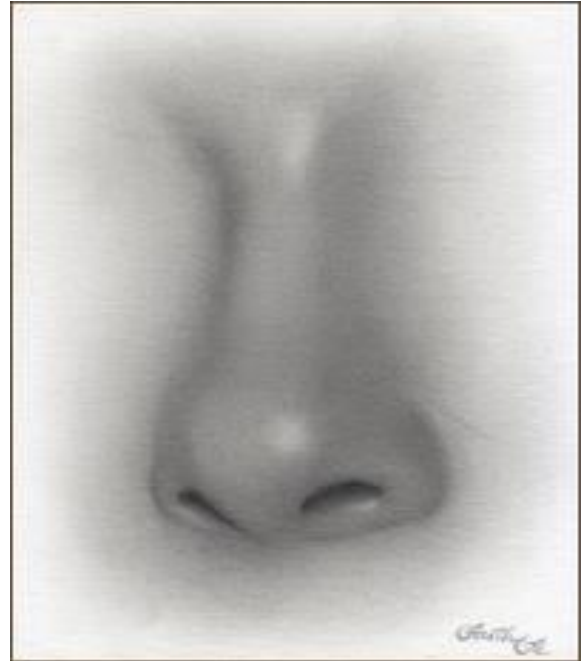
Medscape

BY:

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Topics :

- *Diseases of the nasal septum
- *Epistaxis
- *Turbinate hypertrophy
- *Nasal operations



NOSE :

The shape of the nose is determined by the ethmoid bone and the nasal septum which consists mostly of cartilage anterior and bony part posteriorly and which separates the nostrils.

The main artery of the nose is the facial artery

Most of the people have deviated septum.

Nose above the level of middle turbinate is supply by anterior and posterior ethmoidal arteries , below the middle turbinate supply be sphenopalatine, great palatine and superior labial arteries

The arterial supply to the nose may be principally divided into (1) branches from the internal carotid, namely the branches of the anterior and posterior ethmoid arteries from the ophthalmic artery, and (2) branches from the external carotid, namely the sphenopalatine, greater palatine, superior labial, and angular arteries. The external nose is supplied by the facial artery, which becomes the angular artery coursing over the superomedial aspect of the nose.

Diseases of the nasal septum

Deviated nasal septum

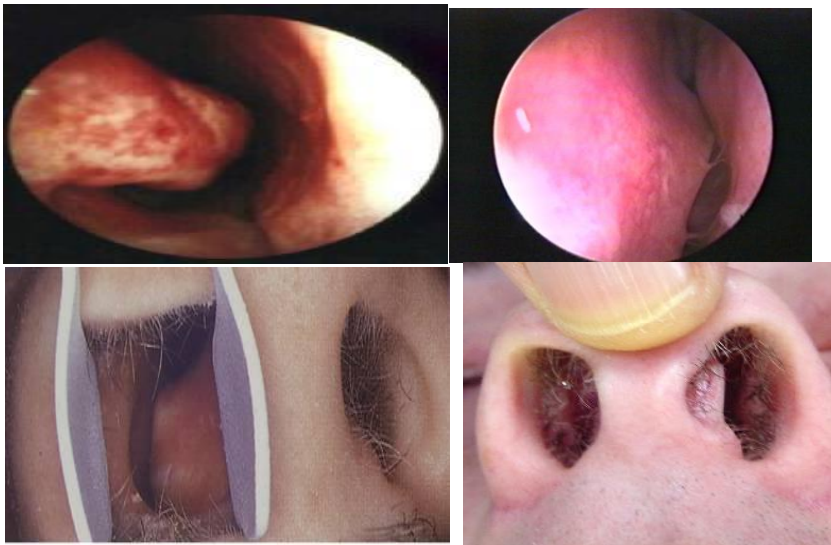
Septal hematoma and abscess

Perforated septum

*Deviated Nasal Septum

Causes : truma , Maldevelopment

Symptoms: Nasal obstruction, External deformity ,Crusting and epistaxis



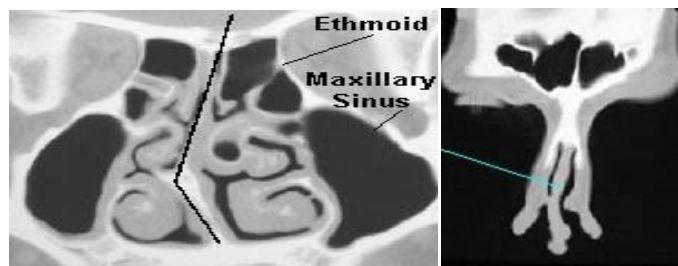
Nasal
obstruction

External
deformity

Note:

* X-ray are not use , CT for bone involvement " not necessary in most cases"

*Endoscopy is routine use .



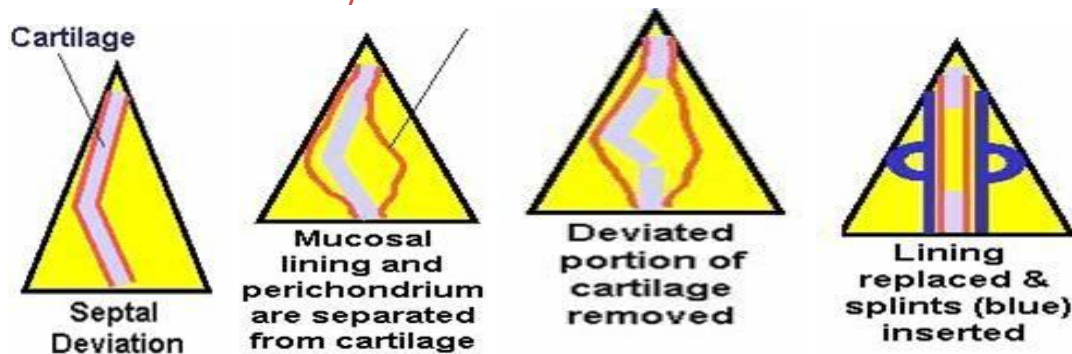
Treatment

no treatment " if there no symptome

surgical treatment.

+ SMR " Septal Mucosal Resection" is an extensive resection of cartilage and bone, including part of the vomer and part of the perpendicular plate of the ethmoid. not use now

+ Septoplasty." is a tissue-sparing procedure. In most situations, the area of deviation is corrected or resected in order to leave behind as much cartilage and bone as possible. Cartilage resection is minimized, particularly when the deviation is located in a structurally vulnerable area"



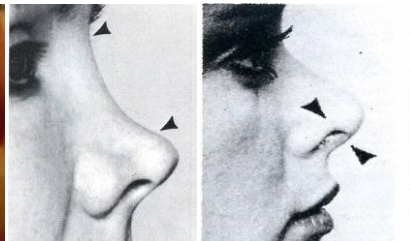
Complications of Septoplasty:



Septal hematoma & abscess



Septal perforation



Nasal deformity



Synechia (adhesion)

*Hematoma Of The Septum

Causes: Direct trauma, Operative trauma and Blood dyscrasias.



Complications:

Cartilage necrosis ,Septal abscess,Permanent thickening of the septum.

Treatment:

Incision and drainage + Systemic antibiotics.

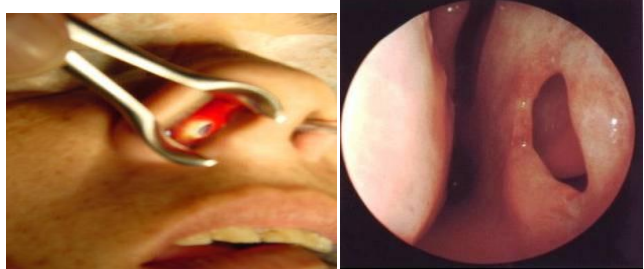
***Perforation Of Septum**

Clinical features:

- Asymptomatic
- Crusting
- Epistaxis
- Whistling

Treatment:

- No treatment
- Nasal wash
- Surgical closure



Turbinate:

in anterior rhinoscopy, anterior part of inferior turbinate is the only one to see among other turbinate. The turbinate have smell fiber.

the investigation are same as in septal deviation (CT scan mainly, endoscopy, X-ray not use, MRI ??)

turbinate problem ususly in inferior and middle .

***Surgical Reduction of the Inferior Turbinate**

- ✓ Turbinate resection, total or partial
Partial : u remove muosal erectile and bony part. The problem here is that u don't know which part is enlarged bony or erectile (if u remove more bony part u will causes atrophic rhinitis so we put a cotton of epinephrine for 10 min if the turbinate shrinked that is erectile enlargement and if not it's bony)
- ✓ Outfracturing of the inferior turbinate
- ✓ Submucosal injection of sclerosing solutions
- ✓ Destructive procedures, including electrocautery, cryosurgery, laser surgery, and submucous resection
" SMD SubMucosal Dithermia" it's out patient procedure, local anesthesia with long needle to cauterize only limited part of anterior inferior turbinate.

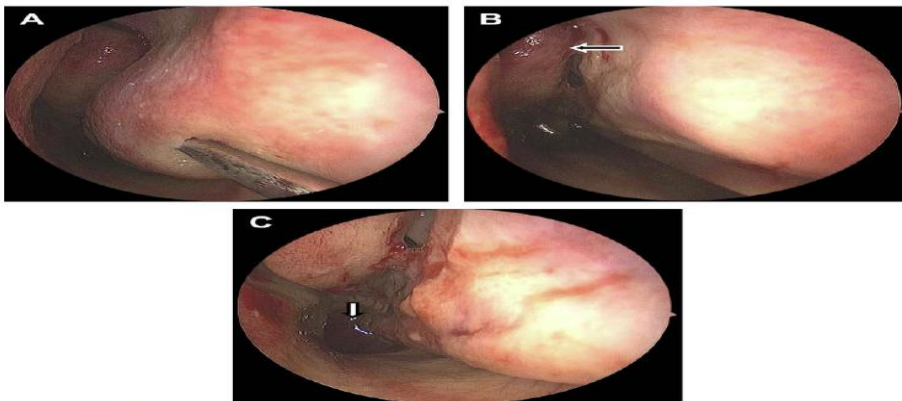


Fig. 1. Microdebrider-assisted submucous resection of a left inferior turbinate. (A) A turbinate blade (2.9-mm microdebrider tip; Medtronic Xomed, Jacksonville, Florida) pierces the turbinate head and is then used to dissect a submucosal flap by tunneling along the length of the turbinate moving anterior to posterior. (B) The turbinate is outfractured using a 7-mm chisel. The middle turbinate is exposed (arrow). (C) The turbinate has been lateralized and choana can be seen (arrow).

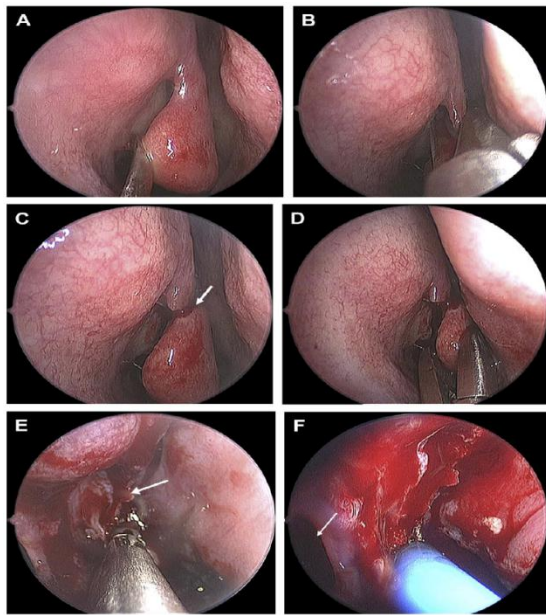


Fig. 2. Technique of endoscopic right partial middle turbinectomy. (A) Middle turbinate being medially fractured to expose its vertical attachment superiorly. (B) Vertical attachment incised with straight turbinate scissors at its most anterior part. (C) After this incision of the anterior, superior attachment (arrow), the head of the turbinate is grasped (D) and dissected inferiorly and posteriorly along the length of the turbinate back to the basal lamella. (E) Incision of the posterior turbinate attachment completes the partial resection. Arrow indicates remnants of the superior and basal lamella attachments being preserved as a landmark. (F) Suction cautery applied to the posterior attachment remnant to coagulate small branches of sphenopalatine artery. Arrow indicates maxillary sinus ostium

EPISTAXIS

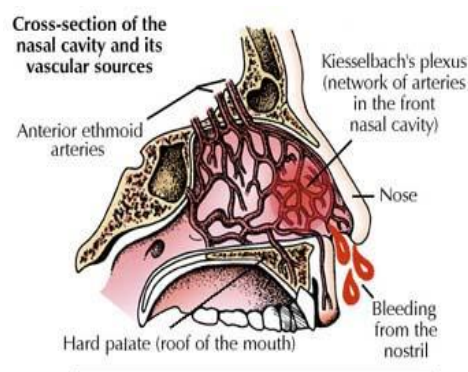
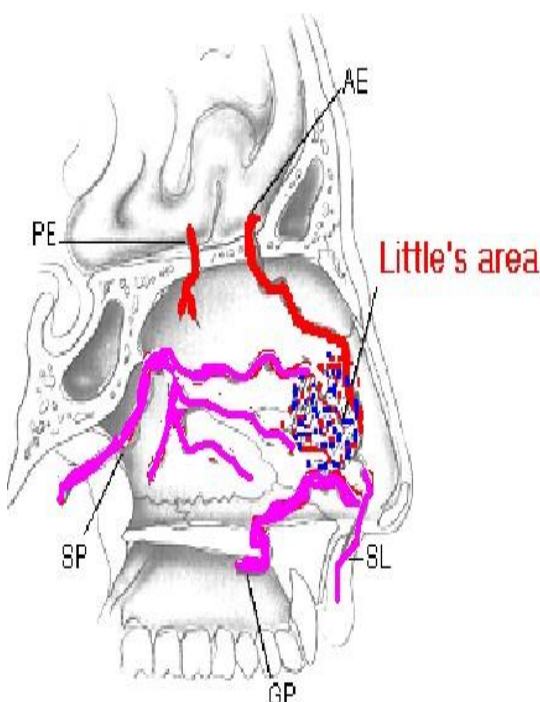
Why bleeding from the nose ?

Vascular organ secondary to incredible heating/humidification requirements

- Vasculature runs just under mucosa
- Arterial to venous anastomoses
- ICA and ECA blood flow

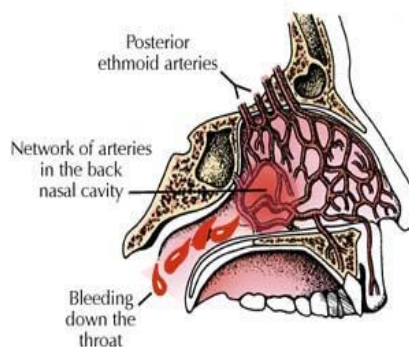
SITES:

- Anterior (Little's area) " in young people and usually unilaterally
- Posterior (vicinity of sphenopalatine foramen)



Kesselbach's Plexus/Little's Area:

- Anterior Ethmoid (Oph)
- Superior Labial A (Facial)
- Sphenopalatine A (IMAX)
- Greater Palatine (IMAX)



Woodruff's Plexus:

- Pharyngeal & Post. Nasal AA of Sphenopalatine A (IMAX)

LOCAL CAUSES:

- Acute trauma
- Chronic trauma
- Deviated septum
- Inflammation of the nose and sinuses
- Tumors
- Idiopathic

SYSTEMIC CAUSES:

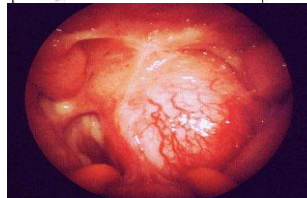
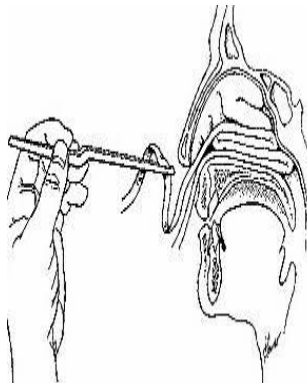
- Coagulation and bleeding diseases
- Atherosclerosis
- Familial hemorrhagic telangiectasia

MANAGEMENT:

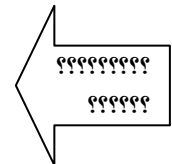
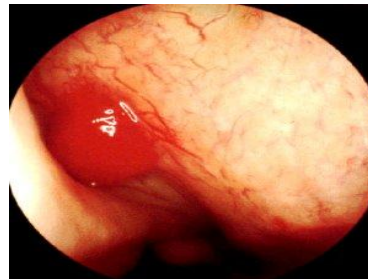
General measures, Stop the bleeding and Prevent further bleeding.

CONTROL THE BLEEDING

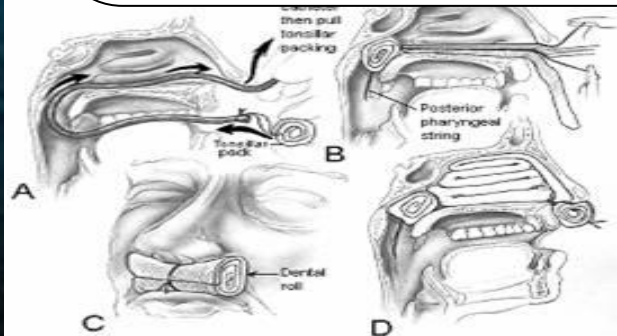
- Digital pressure
- Cautery
- Anterior nasal packing
- Postnasal pack
- Arterial ligation
 - _ Maxillary, Ethmoids, External carotid
- Arterial embolization



the history is very imp"ex; frequency , hypertension, bleeding disorder...etc"
#usually if it is anterior bleeding u will see by examination small cut or ulcer.
#most of cases bleed mid and stop spontaneously , so clean , send to home and follow up after 2-3 days.
if the bleeding point is not seen that's most likely posterior origin "ENT emergency need to admitted "



95% of cases controlled by anterior and posterior pack
in post. Pack we use 2 foley catheter in the nose then we inflate them.
#5% will not stop by packing and cauterization, 2% of them stop by anterior ethmoidal artery ligation, 2% not responding to any procedure above so we do Cadi-Luc approach "ligation of posterior ethmoid artery in pterygoid fossa through maxillary sinus.



1% of bleeding causes by angiofibroma
"sinus tumor" it's difficult to treat and need

- ✗ Don't make packing too tight or too loose
- ✗ Posterior packing>>> admitted the pt., anterior packing either admit him or not
- ✗ In serious bleeding "old" do CT to check nasopharyngeal CA or Maxillary sinus tumor after secure the pt.
- ✗ Adult ,male, unilateral nasal sever bleeding to easy to stop > think about angiofibroma > never take biopsy from bleeding site take the pt to OR. Do CT with contrast to know the feeding vessels , treat it by embolization ,then 4-5 week excision of tumor after shrinks.
- ✗ If u plan for packing more than 24 hours > give antibiotic to prevent infection
- ✗ If u inflate the foley catheter in posterior packing >>injury nasopharynx>> atrophy or closure of Eustachian tube >> middle ear problem