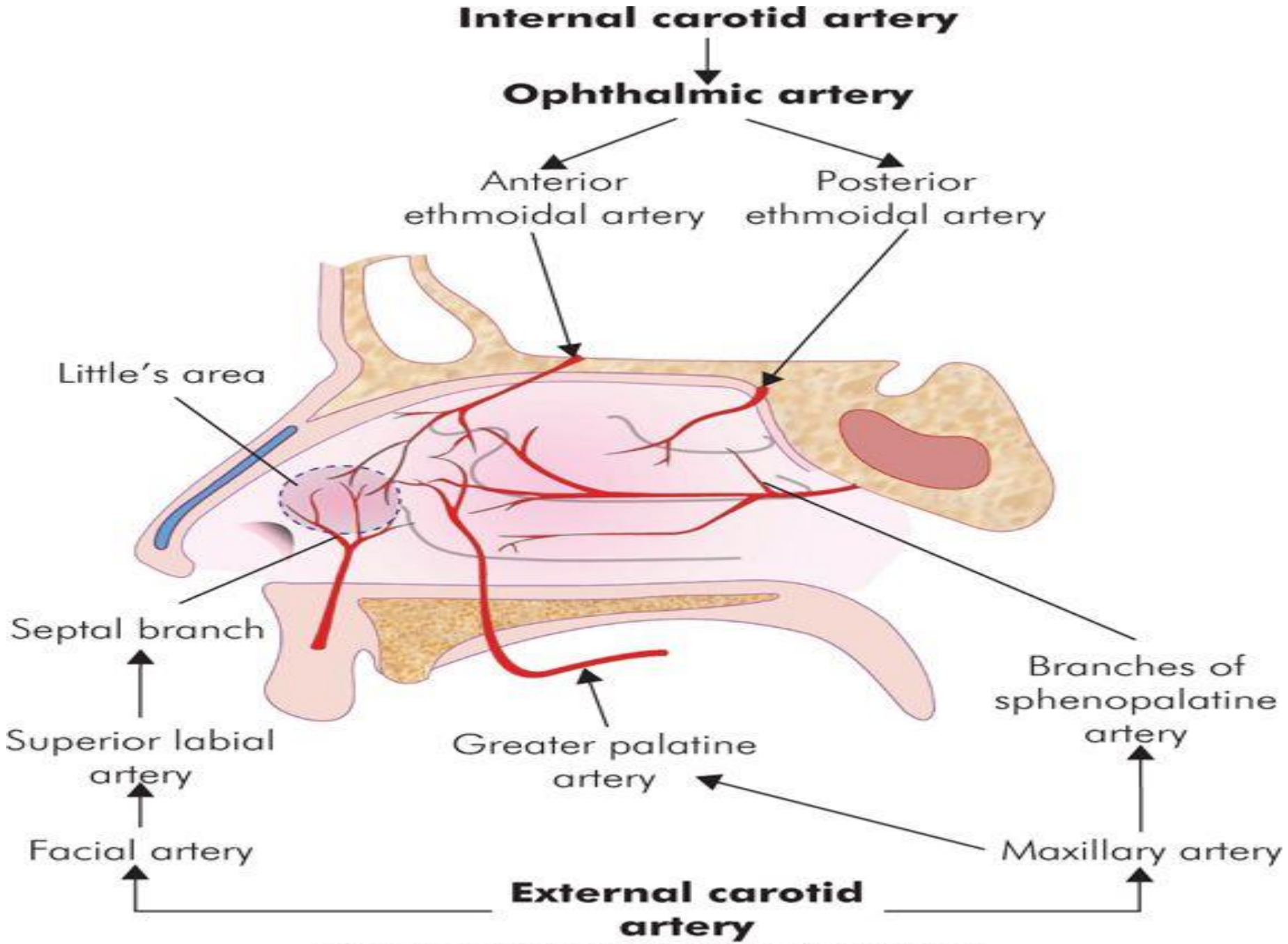
EPISTAXIS



Dhingra: Diseases of Ear Nose and Throat, 5th Edition

Little's Area

It is situated in the anterior inferior part of nasal septum, just above the vestibule.

Four arteries

1-anterior ethmoidal,

2-septal branch of superior labial,

3-septal branch of sphenopalatine

4-greater palatine,

here to form a vascular plexus called "Kiesselbach's plexus".

This area is exposed to the drying effect of inspiratory current and to finger nail trauma, and is the usual site for epistaxis in children and young adults.

Retrocolumellar vein

This vein runs vertically downwards just behind the columella, crosses the floor of nose and joins venous plexus on the lateral nasal wall. This is a common site of venous bleeding in young people.

Woodruff's Area

This vascular area is situated under theposterior end of inferior turbinate where sphenopalatin artery anastomoses withposterior pharyngeal artery Posterior epistaxis may occur in this area.

CAUSES OF EPISTAXIS

They may be divided into:

A- Local

in the nose or nasopharynx.

B- General

C-Idiopathic

A. Local causes :trauma

Injuries of nose (accidental, homicidal, surgery) injuries, nasal intubation ,foreign bodies, rhinolith, blowing of nose too hard and violent sneezing

trauma

Finger nail trauma (obsessive compulsive disorder),

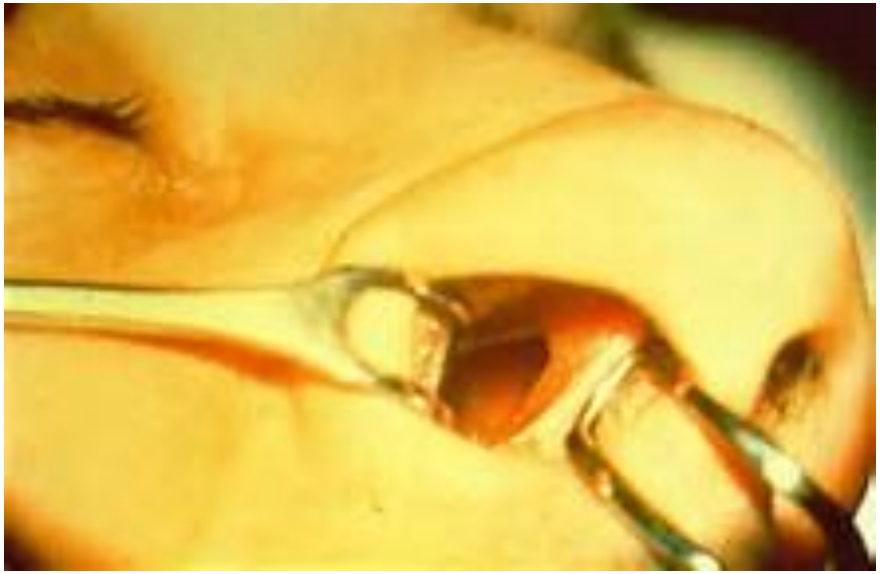
maxillofacial trauma,

head injuries,

Infections: Rhinitis, nasal vestibulitis, sinusitis , diphtheria, Wegener's granulomagranuloma,

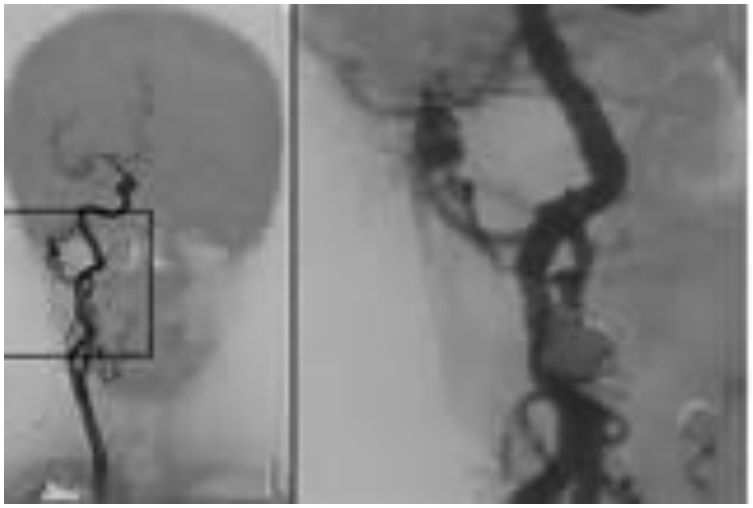
Drugs: nasal sprays and drops of antihistaminics and steroids, sniffing of cocaine, and ASPIRIN

Septal deformities and perforation



Neoplasms:

i. Benign: Hemangioma, inverted papilloma, juvenile angiofibroma, aneurysms,
ii. malignant: Epidermoid carcinoma, adenocarcinoma, sarcoma,



2. General causes:

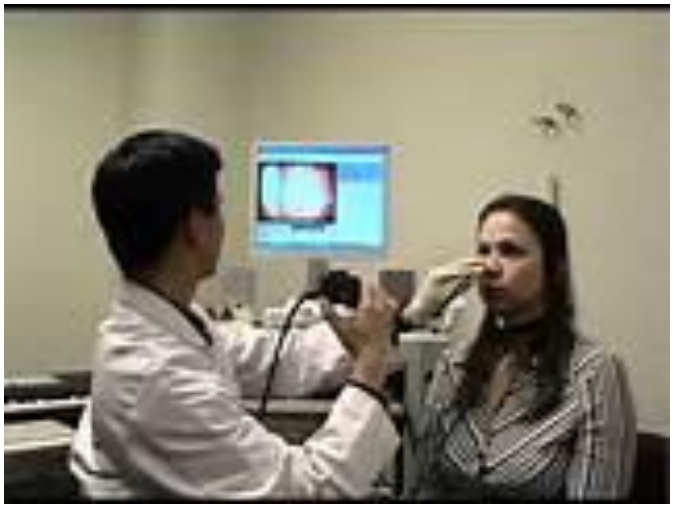
A. Cardiovascular: Hypertension, mitral stenosis, congestive
heart failure, eclampsia of pregnancy, tumors of mediastinum
(raised venous pressure).

B. Hemopoietic: aplastic anemia, leukemia, thrombocytopenic and vascular purpura
, coagulopathies (congenital and acquired), hemophilia, Christmas disease, polycythemia vera, multiple myeloma.

Examination:

1. Examination should include vital parameters, complete ear, nose and throat examination, general features and systemic examination.

2. The examination is often treatment oriented and should try to locate the cause and site of bleeding. Patient needs reassurance



3. The local anesthesia (4% xylocaine) and decongestants (phenylephrine) and mild sedation make the nasal examination as well as patient comfortable.

Investigations :

1. Complete blood count: Anemia, leukemia and thrombocytopenia.

2. Bleeding time, clotting time, prothrombin time, partial thromboplastin time

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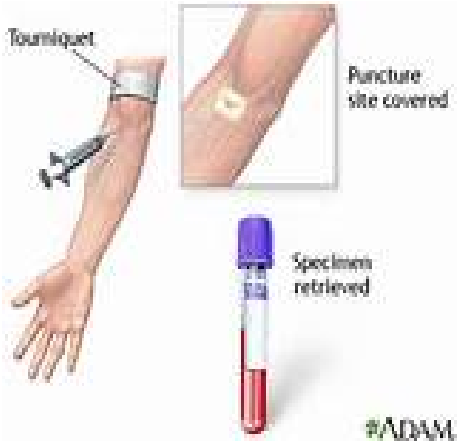
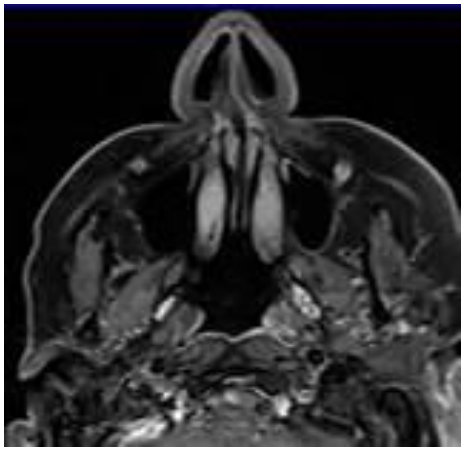
3. Radiological: X-ray chest, computed tomography (CT),
magnetic resonance imaging (MRI) and angiography.





Treatment

A. general measure s home care

- **Prevention**

1. avoid frequent cleaning (obsessive-compulsive tendencies) of nose with tissue paper or finger.
2. maintain proper nasal hydration with saline, gels and ointment.
3. Increase humidity with a bedroom humidifier.

- Treatment

1. Pinch the nose with thumb and index finger for about 5 minutes. it usually stops the bleeding from the Little's area, which is the most common site of bleeding.
2. Place a small piece of cotton soaked in decongestant nasal drops.
3. Lean back no further than 45°.
4. Cold compresses over the nose results in reflex vasoconstriction. Drops of ice-cold water directly in the nose.

B. nasal cautery :

Light anterior nasal packing should be done after cauterization.

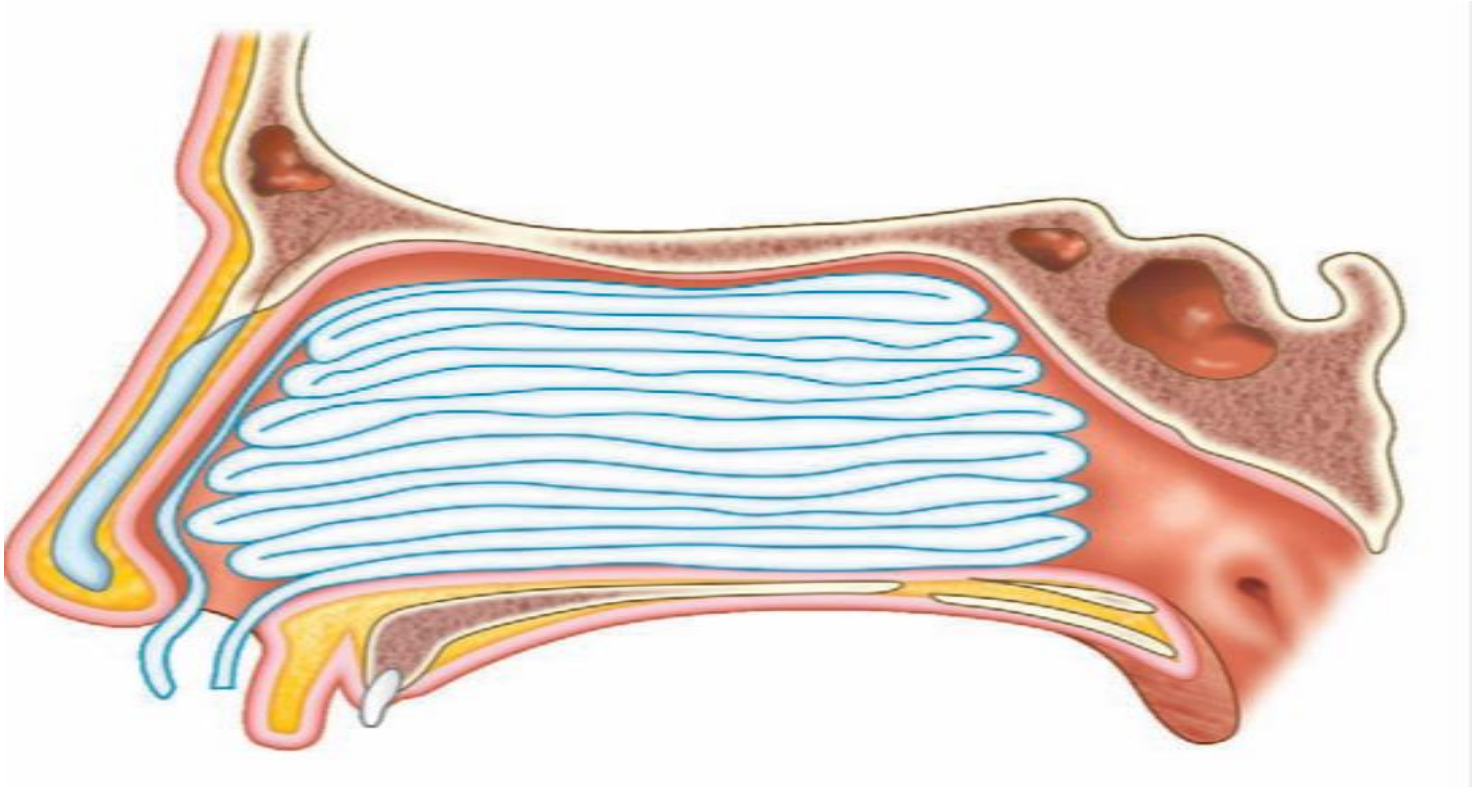
1. Chemical cautery with a bead of silver nitrate is helpful in cases of mild bleeding. The tip of silver nitrate stick should be held in contact of bleeding site for several seconds. The cauterized area becomes grayish-white in color.

2. Electrocautery (monopolar, bipolar or suction cautery): It is employed in cases of failure and severe bleeding

c. anterior nasal packing

Indications: Anterior nasal packing is done in cases of anterior epistaxis. Cauterization of the bleeding area is tried first. But if bleeding is profuse and the site of active cannot be localized, anterior nasal packing is done.

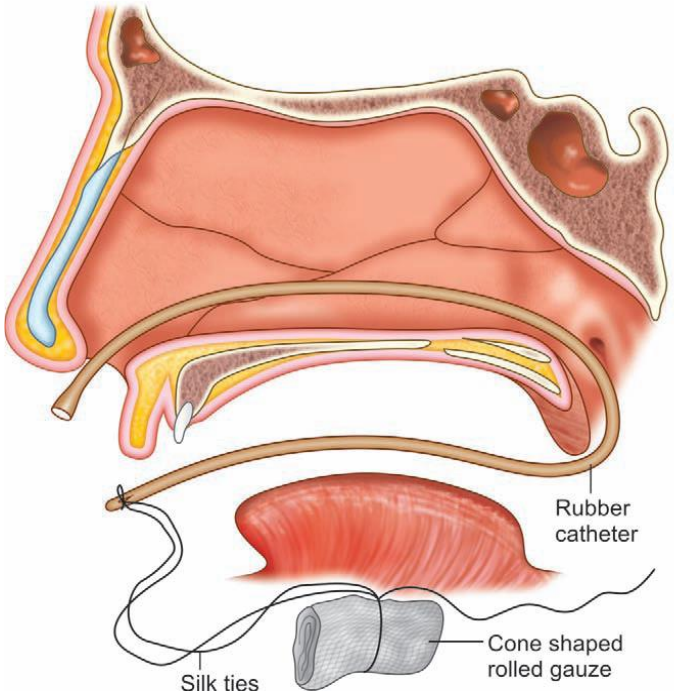
2. Method: Nose must be cleared of blood clots by forceps. One meter long ribbon gauze (width 2.5 cm in adults and 12 mm in children), which is soaked in liquid paraffin, is packed tightly in each nasal cavity by the gauze from floor to up

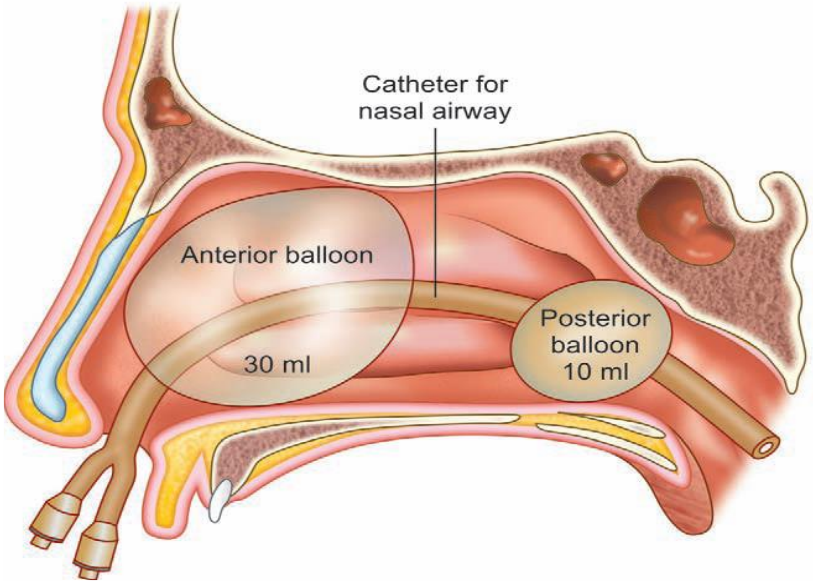


D. posterior nasal packing

Postnasal packing usually requires general anesthesia and patient needs hospitalization.

Indications: Posterior nasal packing is done when cauterization fails and bleeding site cannot be determined





e. arterial embolization

Arterial embolization is done in refractory cases of epistaxis. It is an invasive process and performed in angiography suite byan experienced neuroradiologist.

1. Method: First diagnostic angiography of bilateral carotid system is done. Then in ideal cases, catheter is guided into internal maxillary artery. Gelfoam and/or polyvinyl alcohol particles are used for embolization.

2. Contraindications: It is contraindicated in cases of severe atherosclerotic disease, anomalous anastomosis and allergy to contrast

f. arterial ligation

1-External carotid artery Ligation

2. Maxillary artery Ligation

a. Trans antral

b. Endoscopic ligation of the maxillary artery can also be done through nose.

3. Ethmoidal arteries: The bleeding area above the level of middle turbinate if not controlled by cautery and packing


Thank
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