

ENT IN PRIMARY CARE

DR DIPESH DARJI M.S. ENT

APEX MULTISPECIALITY HOSPITAL

ENT IN PRIMARY CARE

- Ears

- Otitis media
- Hearing loss
- Otitis externa
- Vertigo

- Nose

- Sinusitis
- Allergic rhinitis
- Epistaxis

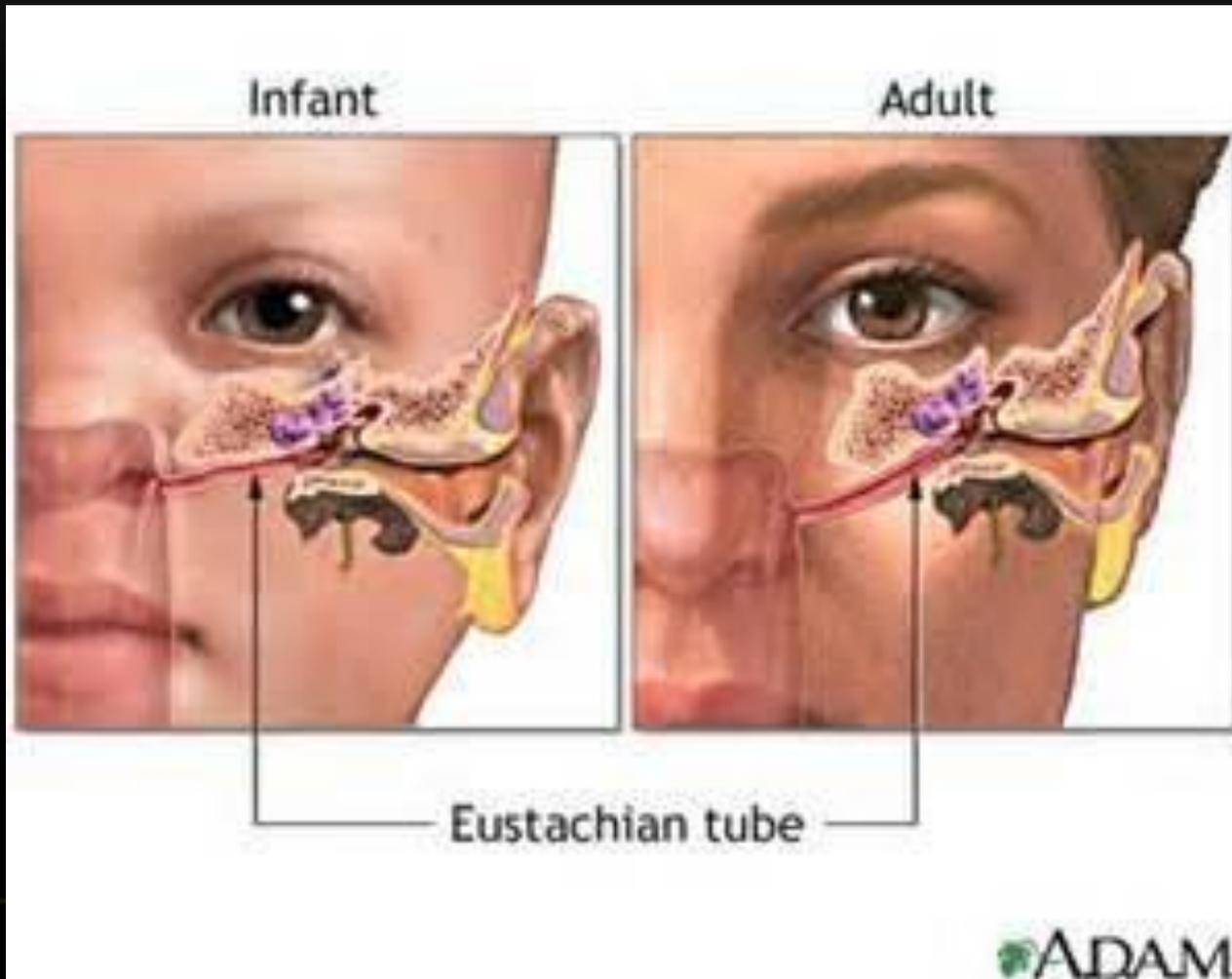
- Throat

- Strep pharyngitis
- Tonsillitis
- Epiglottitis
- Croup

OTITIS MEDIA

- Otitis media (OM) may be defined as inflammation of the middle ear due to any cause.
- It is the second most common disease diagnosed in young children.
- There are two common variants:
 - (1) acute otitis media (AOM) and
 - (2) otitis media with effusion (OME).

OTITIS MEDIA IS AN ANATOMICAL PROBLEM



OTITIS MEDIA – OTOSCOPIC EXAM



Normal tympanic membrane

Otitis media with purulent material seen behind the tympanic membrane



OTITIS MEDIA – OTOSCOPIC EXAM



AOM with bulging tympanic membrane

Otitis media with effusion



OTITIS MEDIA – OTOSCOPIC EXAM



Myringitis during AOM

AOM with perforation draining



OTITIS MEDIA -- TREATMENT

- If the decision is made to treat with antibiotics:
 - **Amoxicillin 80-90 mg/kg/day – 1st line antibiotic therapy.**
 - Azithromycin or clindamycin can be used to treat patients who have a penicillin allergy.
 - There is a high incidence of resistant organisms in AOM.
 - 2nd line therapy includes high-dose amoxicillin/clavulanate, and 2nd or 3rd generation cephalosporins.
 - Alternative: IM Rocephin 50 mg/kg up to 1 g single dose.

OTITIS MEDIA -- EPIDEMIOLOGY

- Beneficial factors
 - Breastfeeding
 - Immunizations
- Predisposing factors
 - Exposure to tobacco smoke
 - Daycare attendance
 - Younger siblings in the home

OTITIS MEDIA – MYRINGOTOMY TUBES

- Indications
 - Recurrent AOM (3-4 episodes in 6 months)
 - Middle ear effusion lasting 3 months or more
 - Speech or learning delays, possibly due to OME
- Benefits
 - Corrects middle ear drainage problems due to horizontal ET
 - AOM can be treated with topical antibiotics

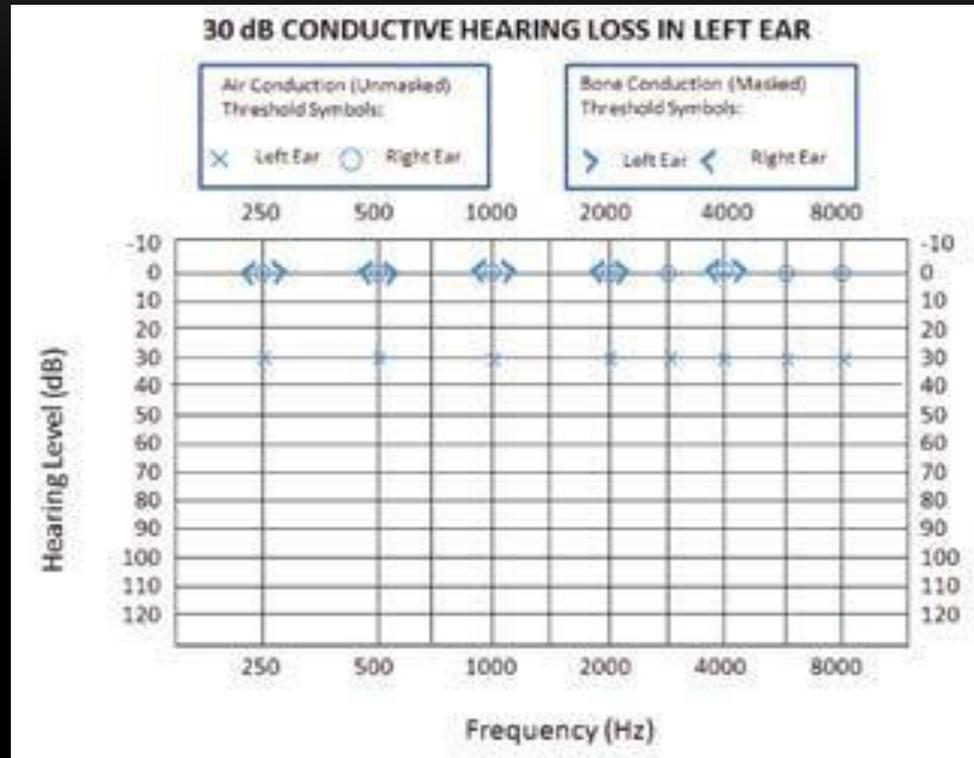
OTITIS MEDIA -- COMPLICATIONS

- Complications of acute otitis media were common in the pre-antibiotic era.
 - Perforation of TM
 - Tympanosclerosis – May lead to conductive hearing loss.
 - Mastoiditis -- Patients with acute mastoiditis present with fever, ear pain, and a protruding auricle.
 - Meningitis
- With increasing antibiotic resistance, especially *Streptococcus pneumoniae*, these complications may again become more common.

HEARING LOSS

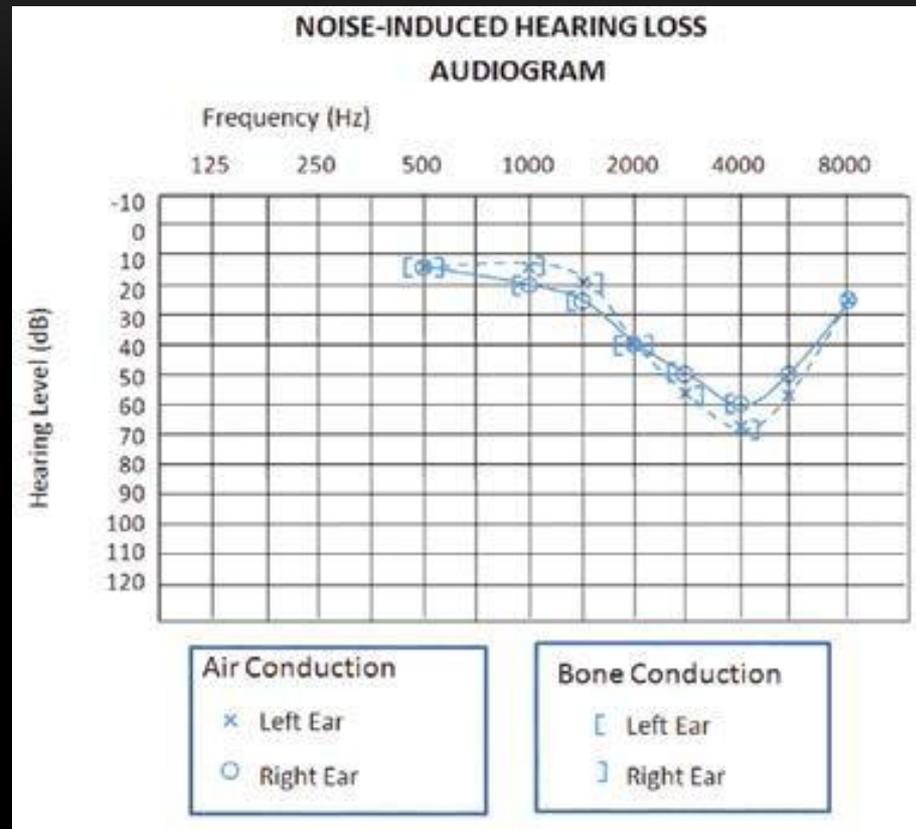
- Conductive hearing loss
 - Cerumen impactions
 - Swelling of the external auditory canal
 - Tympanic membrane perforation
 - Middle ear fluid
 - Ossicular chain abnormalities
 - Sensorineural hearing loss
 - Injury to hair cells in the cochlea or neural elements innervating the hair cells.
 - Due to: persistent noise exposure, age-related (presbycusis), genetic factors, and infectious or postinflammatory processes.
 - Acoustic neuroma
-

HEARING LOSS -- AUDIOMETRY



A conductive hearing loss in the left ear due to otitis media with effusion. Note that bone conduction thresholds are normal in both ears, but air conduction on the left is 30 dB poorer than that measured on the right.

HEARING LOSS -- AUDIOMETRY



This audiogram suggests noise exposure that may be encountered occasionally in younger individuals who have been exposed to hazardous or “toxic” noise. Note the high-frequency dip, with a maximum loss at 4000 Hz.

OTITIS EXTERNA

- Otitis externa (OE) is an inflammation or infection of the external auditory canal (EAC), the auricle, or both
- This condition can be found in all age groups.



DIZZINESS

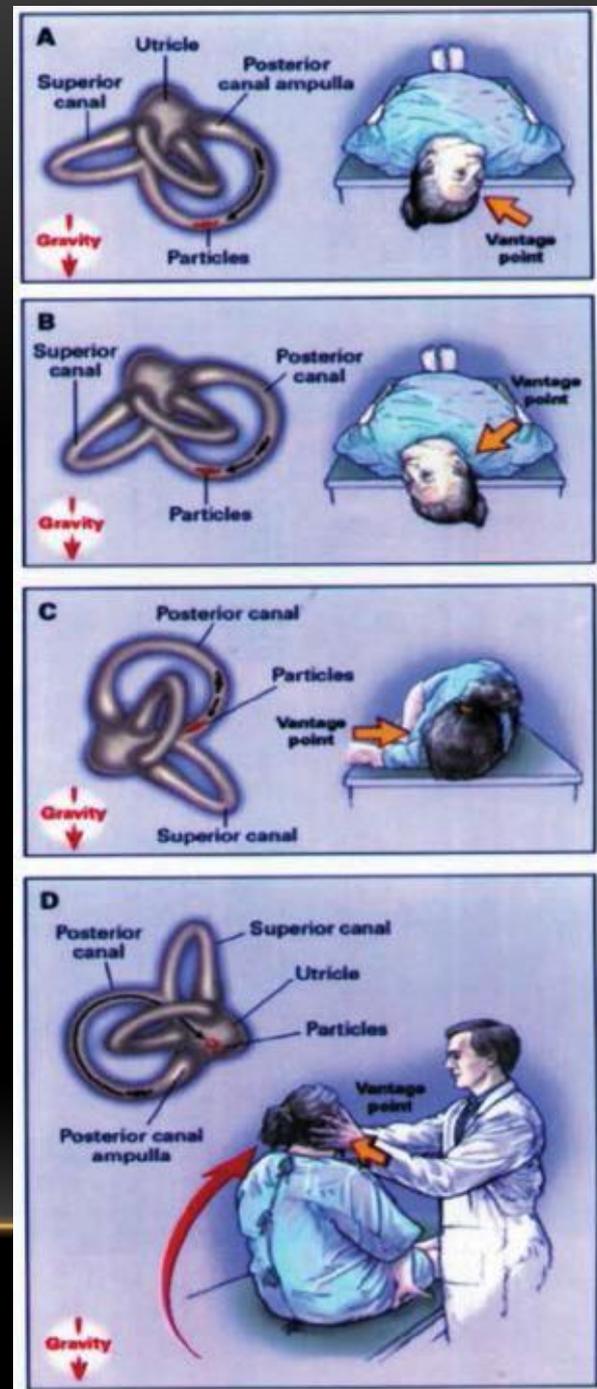
- Patients frequently present with a complaint of “dizziness,” including symptoms such as disequilibrium, syncope, lightheadedness, ataxia, and vertigo.
- True vertigo (an illusion of motion) is primarily associated with the balance organs of the inner ear. These are referred to as peripheral vestibular disorders.
- Evaluations can be done by many physical therapy departments.

BPPV -- TREATMENT

Bedside maneuver for the treatment of a patient with benign paroxysmal positional vertigo (BPPV) affecting the right posterior semicircular canal. The presumed position of the debris within the labyrinth during the maneuver is shown in panels A–D. The maneuver is a three-step procedure. The Dix-Hallpike test is performed with the patient's head rotated 45° toward the right ear, and the neck slightly extended with the chin pointed slightly upward. This position results in the patient's head hanging to the right (panel A).

Once the vertigo and the nystagmus provoked by the Dix-Hallpike test cease, the patient's head is rotated about the rostral-caudal body axis until the left ear is down (panel B). Then the head and body are further rotated until the head is face down (panel C). The vertex of the head is kept tilted downward throughout the rotation. The maneuver usually provokes brief vertigo. The patient should be kept in the final, facedown position for about 10–15 seconds.

With the head kept turned toward the left shoulder, the patient is brought into the seated position (panel D). Once the patient is upright, the head is tilted so that the chin is pointed slightly downward.



ACUTE SINUSITIS

- Prolonged mucosal edema, from sinus obstruction and retention of secretions, may lead to acute bacterial rhinosinusitis.
- Patients may exhibit several of the major symptoms:
 - Facial pressure/pain
 - Facial congestion/fullness
 - Purulent nasal discharge
 - Nasal obstruction
- And one or more of the minor symptoms:
 - Headache
 - Fever
 - Fatigue
 - Cough
 - Toothache
 - Halitosis
 - Ear fullness/pressure

ALLERGIC RHINITIS

There are three mainstays of treating inhalant allergies:

- Pharmacotherapy
- Avoidance of the provoking allergen
- Immunotherapy

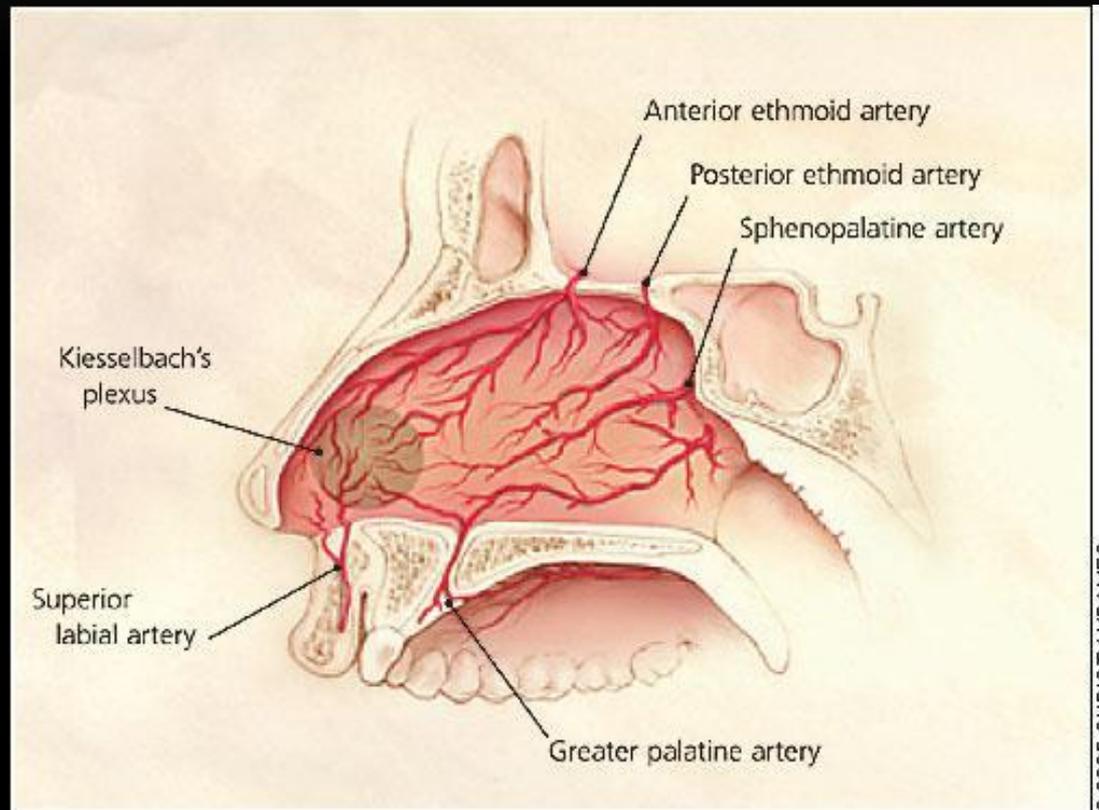


EPISTAXIS

- Epistaxis has been reported to occur in up to 60 percent of the general population
- The condition has a bimodal distribution, with incidence peaks at ages younger than 10 years and older than 50 years
- Certain high-risk groups, such as the elderly, require rapid intervention to stem bleeding and prevent further complications

EPISTAXIS -- ANATOMY

The vascular supply of the nose originates from the ethmoid branches of the internal carotid arteries and the facial and internal maxillary divisions of the external carotid arteries

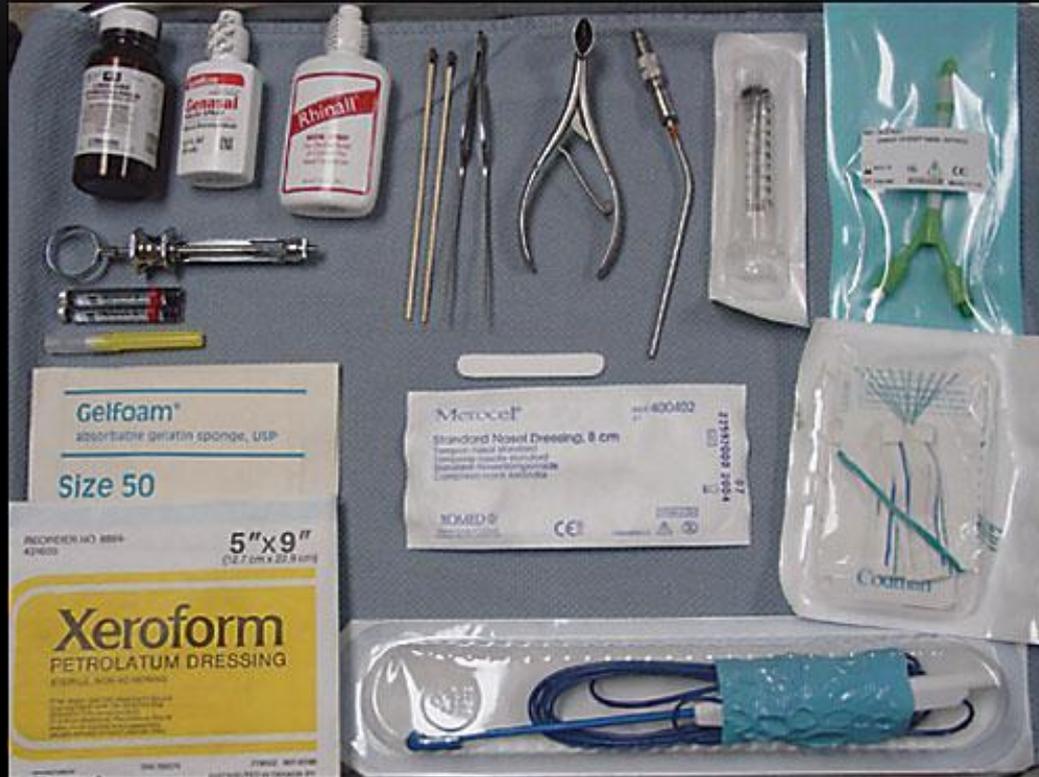


Although nasal circulation is complex (Figure 1), epistaxis usually is described as either anterior or posterior bleeding. This simple distinction provides a useful basis for management.

EPISTAXIS -- MANAGEMENT

- Initial management includes compression of the nostrils (application of direct pressure to the septal area) and plugging of the affected nostril with gauze or cotton that has been soaked in a topical decongestant.
- Direct pressure should be applied continuously for at least five minutes, and for up to 20 minutes.
- Tilting the head forward prevents blood from pooling in the posterior pharynx, thereby avoiding nausea and airway obstruction.
- Hemodynamic stability and airway patency should be confirmed. Fluid resuscitation should be initiated if volume depletion is suspected.

EPISTAXIS -- MANAGEMENT



Typical contents of an epistaxis tray. Top row: nasal decongestant sprays and local anesthetic, silver nitrate cauterization sticks, bayonet forceps, nasal speculum, Frazier suction tip, posterior double balloon system and syringe for balloon inflation. Bottom row: Packing materials, including nonadherent gauze impregnated with petroleum jelly and 3 percent bismuth tribromophenate (Xeroform), Merocel, Gelfoam, and suction cauterization.

EPISTAXIS -- MANAGEMENT

- Every attempt should be made to locate the source of bleeding that does not respond to simple compression and nasal plugging
- Diffuse oozing, multiple bleeding sites, or recurrent bleeding may indicate a systemic process such as hypertension, anticoagulation, or coagulopathy. In such cases, a hematologic evaluation should be performed
- Tests include CBC, PT/INR, PTT and, if indicated, blood typing and crossmatching
- Although most patients with epistaxis can be treated as outpatients, hospital admission and close observation should be considered for elderly patients and patients with posterior bleeding or coagulopathy. Admission also may be prudent for patients with complicating comorbid conditions such as coronary artery disease, severe hypertension, or significant anemia

EPISTAXIS -- MANAGEMENT

ANTERIOR BLEEDS

- Topical oxymetazoline (Afrin) spray alone often stops the hemorrhage.
- LET solution (lidocaine 4%, epinephrine 0.1%, and tetracaine 0.4%) applied to a cotton ball or gauze and allowed to remain in the nares for 10-15 minutes is very useful in providing vasoconstriction and analgesia.
- For bleeding that is likely to require more aggressive treatment, a local anesthetic, such as a 4 percent cocaine solution or tetracaine or lidocaine (Xylocaine) solution, should be used.
- Adequate anesthesia should be obtained before treatment proceeds.
- Intravenous access should be obtained in difficult cases, especially when anxiolytic medications are to be used.

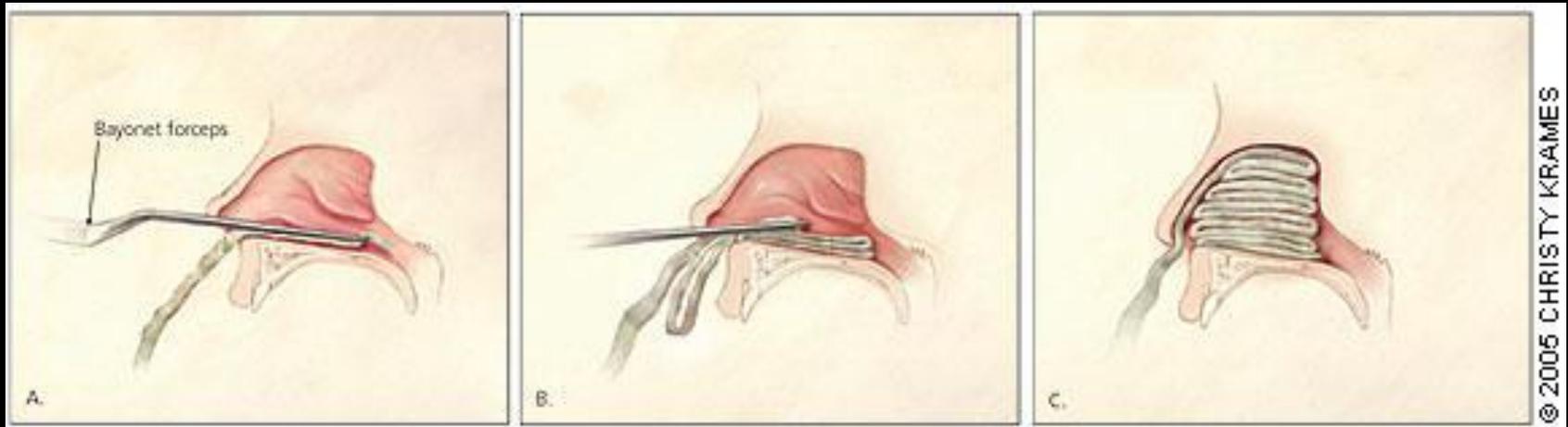
EPISTAXIS -- MANAGEMENT

ANTERIOR BLEEDS

- Cotton pledgets soaked in vasoconstrictor and anesthetic should be placed in the anterior nasal cavity, and direct pressure should be applied at both sides of the nose for at least five minutes.
- If this measure is unsuccessful, chemical cautery can be attempted using a silver nitrate stick applied directly to the bleeding site for approximately 30 seconds .
- Other treatment options include hemostatic packing with absorbable gelatin foam (Gelfoam) or oxidized cellulose (Surgicel). Use of desmopressin spray (DDAVP) may be considered in a patient with a known bleeding disorder.
- Larger vessels generally respond more readily to electrocautery.
- Note that use of electrocautery on both sides of the septum may increase the risk of septal perforation.

EPISTAXIS -- MANAGEMENT

If local treatments fail to stop anterior bleeding, the anterior nasal cavity should be packed, from posterior to anterior, with ribbon gauze impregnated with petroleum jelly or polymyxin B-bacitracin zinc-neomycin (Neosporin) ointment. Nonadherent gauze impregnated with petroleum jelly and 3 percent bismuth tribromophenate (Xeroform) also works well for this purpose.^{5,9} Bayonet forceps and a nasal speculum are used to approximate the accordion-folded layers of the gauze, which should extend as far back into the nose as possible. Alternatively, a preformed nasal tampon (Merocel or Doyle sponge) may be used



EPISTAXIS -- MANAGEMENT

POSTERIOR BLEEDS

- Posterior bleeding is much less common than anterior bleeding and usually is treated by an otolaryngologist.
- Various balloon systems are effective for managing posterior bleeding and are less complicated than the packing procedure.
- The double-balloon device is passed into the affected nostril under topical anesthesia until it reaches the nasopharynx. The posterior balloon then is inflated with 7 to 10 mL of saline, and the catheter is withdrawn carefully so that the balloon seats in the posterior nasal cavity to tamponade the bleeding source. Next, the anterior balloon is inflated with roughly 15 to 30 mL of saline in the anterior nasal cavity to prevent retrograde travel of the posterior balloon and subsequent airway obstruction.
- If a specialized balloon device is not available, a Foley catheter (10 to 14 French) with a 30-mL balloon may be used.

STREP PHARYNGITIS

- Sore throat is one of the most common reasons for visits to family physicians.
- Most patients with sore throat have an infectious cause (pharyngitis), but less than 20 percent have a clear indication for antibiotic therapy.
- Because of recent improvements in rapid streptococcal antigen tests, throat culture can be reserved for patients whose symptoms do not improve over time or who do not respond to antibiotics.



STREP PHARYNGITIS

- Pharyngitis is diagnosed in 11 million patients in U.S. emergency departments and ambulatory settings annually.
- Most episodes are viral.
- Group A beta-hemolytic streptococcus (GABHS), the most common bacterial etiology, accounts for 15 to 30 percent of cases of acute pharyngitis in children and 5 to 20 percent in adults.
- One in four children with acute sore throat has serologically confirmed GABHS pharyngitis.
- Late winter and early spring are peak GABHS seasons.
- The infection is transmitted via respiratory secretions, and the incubation period is 24 to 72 hours.

TONSILLAR HYPERTROPHY

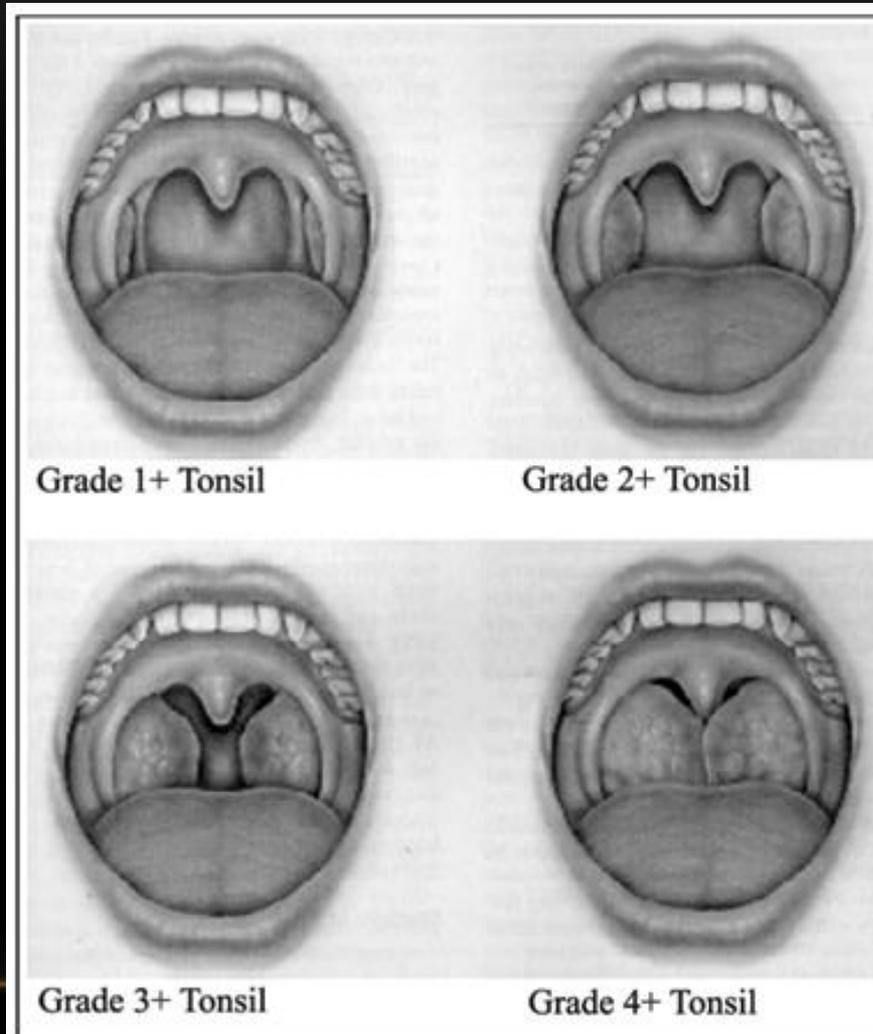


Figure 1 – Grading of palatine tonsils hypertrophy proposed by L. Brodsky.

OBSTRUCTIVE SLEEP DISORDERS

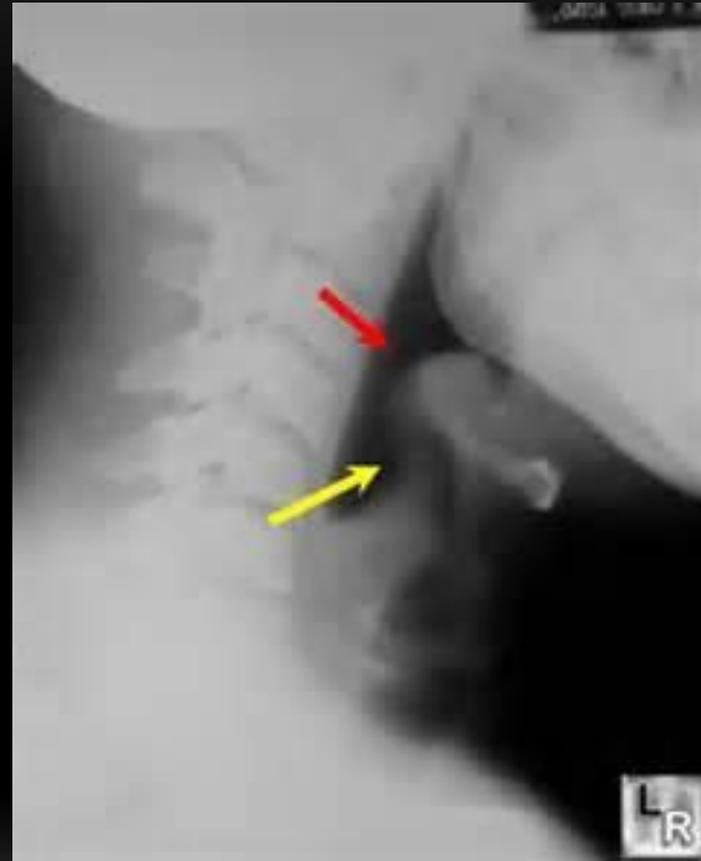
- Enlarged tonsils and adenoids are often the source of airway obstruction in children, and they result in sleep-disordered breathing.
- Daytime lethargy, obstructive symptoms, growth retardation, behavioral problems, including poor school performance and hyperactivity, and nocturnal enuresis are often associated with the obstructive sleep disorder.
- In severe—although rare—cases, pulmonary or cardiac disease can result.
- Diagnosis is usually straightforward, based on history and physical examination.
- In some instances, a formal sleep study may be required.
- If the diagnosis of obstruction is substantiated, tonsillectomy and adenoidectomy is often curative, although in some populations persistent or recurrent symptoms may occur.

EPIGLOTTITIS

- Acute epiglottitis is an infection of the supraglottic (above the vocal cords) structures that causes swelling of the portion of the larynx above the vocal cords.
 - The swelling can become so severe that it blocks the airway.
 - It is fulminant and usually caused by *Haemophilus influenzae* type B organisms.
 - This fatal disease was common 20 years ago, but the incidence has decreased dramatically with widespread use of the *H. influenzae* (HiB) vaccine.
 - The typical affected child is three to six years old and septic.
-

EPIGLOTTITIS

- Often, the child was breathing normally just hours earlier.
- The cardinal signs of acute epiglottitis are stridor, leaning forward in a tripod posture, and drooling because it hurts to swallow.
- If you suspect acute epiglottitis, immediately call an otolaryngologist, anesthesiologist, and pediatrician.
- A lateral soft-tissue view of neck will show a “thumb sign”



EMERGENCIES

- FORIGEN BODIES –EAR ,NOSE,THROAT OESOPHAGUS, TREACHEA

THANK YOU
