Chapter 12
ENT EMERGENCIES

Learning Objectives:

- Identify Common ENT Emergencies and manage them appropriately
- Timely referral when necessary.

EPISTAXIS

- Most common site of bleeding of nose is anterior bleeding from the Little's area (>90%).
- If Active bleeding resuscitate. Open IV line, grouping, cross match.
- Digital pressure should be applied over nose for at least 10 minutes. (More than the clotting time).
- Try and determine the underlying cause. Systemic causes should be treated. E.g. Hypertension, bleeding dyscrasias, blood thinners (anticoagulants).
- If bleeding stops after pinching, identify bleeding point. If bleeding point is seen, cauterize with silver nitrate and cover with antibiotic ointment.
- Anterior nasal pack is given if bleeding doesn't stop. Make pack with betadine and antibiotic ointment or betadine-glycerin.
- Adrenaline packs is not recommended as it leads to rebound vasodilatation and more bleeding.
- Posterior nasal pack is given if bleeding continues and bleeding point is not seen anteriorly with Foley's catheter followed by anterior pack.
- Consider blood transfusion if bleeding does not stop and refer for further treatment.

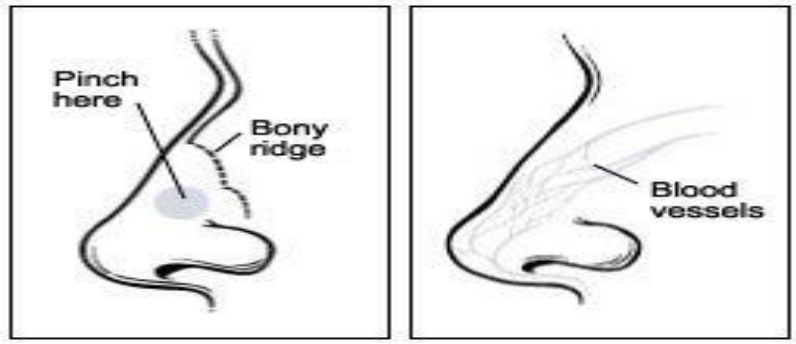

Figure 12.1 Diagram showing pinch below the bony ridge over a soft part of nose (left) and diagram showing blood vessels in nasal cavity (right).

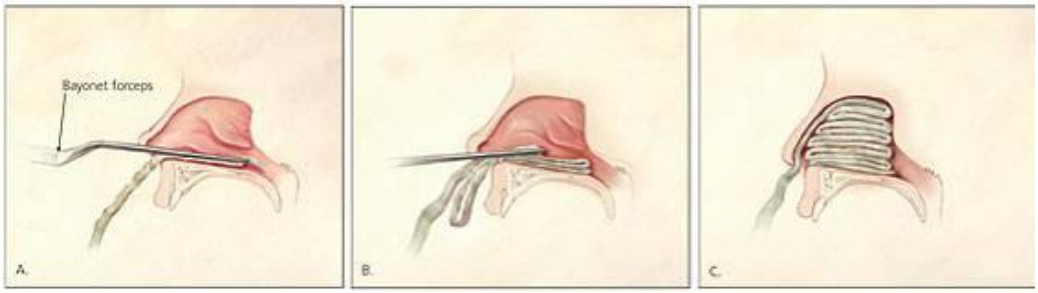

Figure 12.2 Anterior nasal packing by using tileys forceps and soft nasal packs.

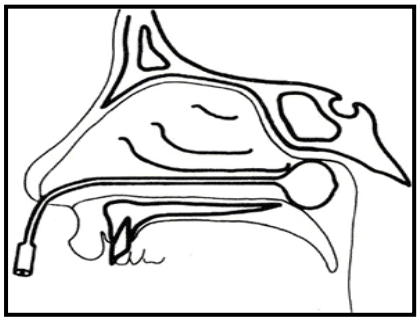

Figure 12.3 Posterior nasal packing by using Foley's catheter.

Posterior nasal packing may be easily done using a Foley's catheter. Insert till the tip passes the posterior nares, then inflate bulb with air and pull catheter out till it is tight against and

fix at the nostril. Clamp with umbilical cord tie and protect Ala with proper dressing to prevent necrosis.

STRIDOR AND AIRWAY EMERGENCIES

- Stridor is the audible noisy sound produced by turbulent flow of air through a narrowed segment of the respiratory tract, more specifically the larger airways.
- Laryngeal stridor is usually inspiratory and bronchial stridor is usually expiratory.
- Allergic or infective bronchospasm is the commonest cause of expiratory stridor but we should also bear in mind the possibility of an inhaled foreign body.
- Stridor is a low-pitched inspiratory snoring sound typically produced by nasal or nasopharyngeal obstruction

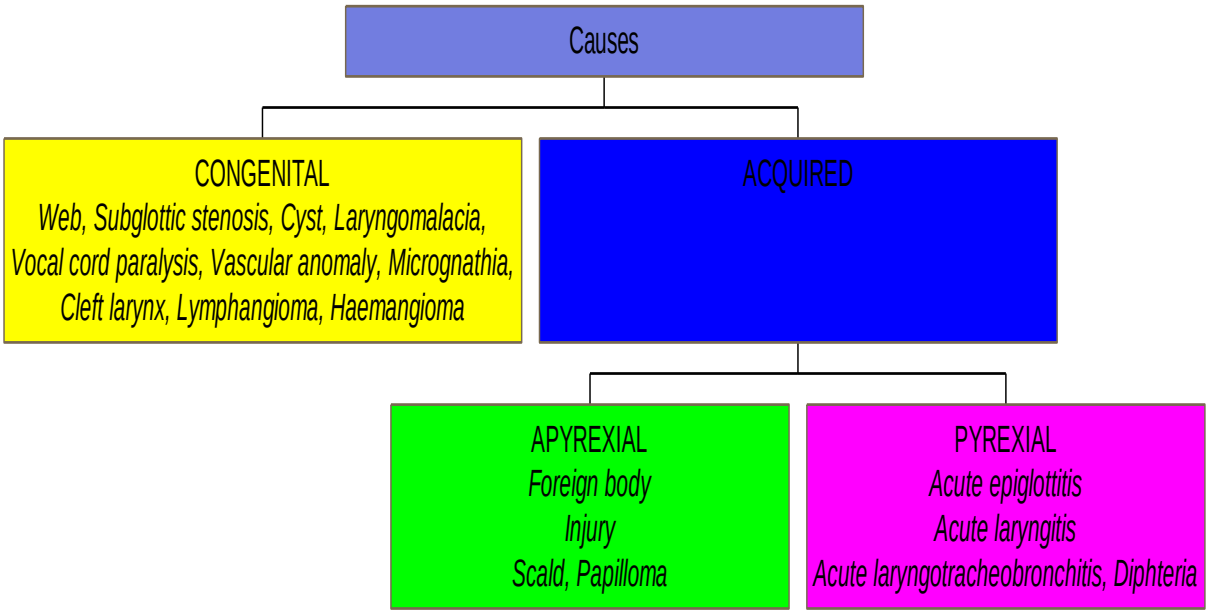

Figure 12.4 causes of stridor and airway emergencies.

History

Time of onset: To find whether the cause is congenital or acquired
Mode of onset: Sudden onset foreign body, oedema.
Gradual and progressive laryngomalacia, subglottic hemangioma, juvenile papilloma
Duration: Short foreign body, oedema, infections, Long laryngomalacia, laryngeal stenosis, subglottic hemangioma, anomalies of tongue and jaw.
Relation to feeding: Aspiration in laryngeal paralysis, esophageal atresia, laryngeal cleft, vascular ring.
Cyanotic spells: Indicate need for airway maintenance, Aspiration or ingestion of a foreign body, Laryngeal trauma blunt injury to the larynx, intubation, and endoscopy

Physical Examination

- Oral cavity, throat, larynx, neck and chest
- Level of consciousness, PR, BP, RR, cyanosis, oxygen saturation
- Respiratory distress recession in suprasternal notch, intercostal spaces, and epigastrium during respiratory effort.
- Note whether stridor is inspiratory, expiratory or biphasic which indicates the probable site of obstruction.

- Oral cavity, throat, larynx, neck and chest
- Level of consciousness, PR, BP, RR, cyanosis, oxygen saturation
- Respiratory distress recession in suprasternal notch, intercostal spaces, and epigastrium during respiratory effort.
- Note whether stridor is inspiratory, expiratory or biphasic which indicates the probable site of obstruction.

Investigation

- FBC, serum biochemistry, blood gases.
- Throat swab, blood culture.
- X-ray of chest and soft tissue of the neck both in anteroposterior and lateral views.
- CT-scan of chest for mediastinal mass.
- Barium swallow with lipoidal for atresia of oesophagus, tracheobronchial fistula or aberrant vessels.
- Angiography if aberrant blood vessels are suspected.

Management

- Airway need immediate protection (tracheostomy or intubation) in severe cases.
- In less severe cases, trial of medical treatment first to improve airway.
- Look for impending exhaustion/tiredness
- Can patient talk? -monosyllabic or in sentences to help decide severity.
- Always better to intubate/perform tracheostomy early than late when upper airway becomes obstructed
- Bag and mask Ventilation.
- Endotracheal intubation
- Cricothyroidotomy with wide bore needles.
- Cricothyroidotomy.
- Tracheostomy.
- Treat the cause.

Procedure for Cricothyroidotomy

- Identify the cricothyroid membrane in between the thyroid and cricoid cartilage and mark it.
- Infiltrate local anesthesia in this region.
- Perforate this region using a No 11 or No 15 blade.
- Insert a mini tracheostomy tube or any other tubular device that may serve the purpose.

- Ensure that the cricoid cartilage is not traumatized.
- Ensure it is in the airway and fix with sutures.
- Refer to a higher center for formal tracheostomy.

Cricothyroidotomy: 1-2 wide bore needle (blood transfusion Needle) in cricothyroid membrane is enough to maintain airway. Give oxygen through and refer to ENT center escorted.

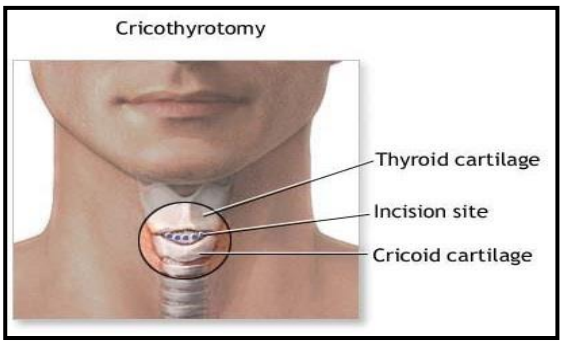

Figure 12.7 Diagram showing cricothyrotomy incision site.

Treat the Cause:

- **Peritonsillar Abscess (quinsy)**

- Pus collection in peritonsillar space.
- Hot Potato voice.
- Drooling, Trismus
- Medialized tonsil
- Very painful. Dysphagia, odynophagia, dehydration.
- Incision and Drainage. Take Guarded knife (no. 11 blades wrapped with cello tape, expose 1 cm and nick at most prominent site or junction of base of uvula with anterior pillar. Open with artery forceps.
- Admit and iv antibiotics

- **Ludwig's Angina**

- Submandibular space infection.
- Cellulitis and diffuse soft tissue swelling.
- Raised floor of mouth and woody hard feel
- Tongue pushed back causing airway obstruction.
- Admit, iv fluids, iv antibiotics (cover both anaerobes and aerobes), humidification, dexamethasone/hydrocortisone.
- Release incision in neck and refer for definitive management if airway is threatened.

EAR EMERGENCIES

Traumatic Perforation of Tympanic Membrane

- History of trauma to ear
- Signs – ragged, irregular perforation of tympanic membrane. Multiple perforations. Blood clots in tympanic membrane. Other signs of injuries.
- No aggressive management required, most perforations heal naturally
- Ear should be kept dry
- Consider surgery only if perforation does not heal within about 3 months.
- Hearing assessment by audiologist for medicolegal cases.

Auricular Hematoma

- Might be post trauma or spontaneous
- Drainage is required to prevent "cauliflower" ear
- Infiltrate with local anesthesia.
- Incise at the most dependent area and drain all blood/ fluid out

- Pressure dressing should be given, dressing should conform to the contours of the pinna to prevent recollection. Antibiotics cover.

Acute Otitis Media

History

- Fever
- Otalgia
- Hearing loss
- Purulent discharge (+/-)
- History of ARI

Signs

- Congested and bulging tympanic membrane
- Purulent discharge (+/-)

Treatment

- Antibiotics for a week
- Nasal decongestants
- Steam inhalation.
- Ear drops only if perforation and discharging after ear toilet.

Complications of ASOM/CSOM

Meningitis/labyrinthitis/ Brain Abscess/ Facial nerve paralysis/Mastoiditis/Sub periosteal and Neck Abscess. Immediate referral required.

Sudden Sensorineural Hearing Loss

- Sudden Sensorineural Hearing loss affecting three consecutive frequency of less than 3 days duration.
- 50% recover if treated early within a week
- Prednisolone 1 mg/kg per day I tapering dose after excluding HTN, DM etc.

NASAL EMERGENCIES

Nasal bone fracture

- History of direct trauma to nasal bone
- Nasal bone fracture without obvious deformity or displacement usually does not require active management
- Control epistaxis if present
- Palpate for bony crepitus by moving nasal bone
- Presence of crepitus indicates fracture
- If no displacement then POP cast can be given for use only while sleeping to prevent displacement
- In case of displacement then refer to ENT center for reduction of fracture
- Rule out eye injury, orbital fracture, entrapment of eye muscles (eye mobility)

Septal hematoma

- Needs treatment to prevent saddle nose deformity by destruction of cartilage.
- Seen as unilateral or bilateral swelling on the nasal septum
- Swelling is boggy
- Local anesthesia should be infiltrated or applied topically

- Incise under good illumination at the most accessible and dependent part of the hematoma
- Place an anterior nasal pack to prevent recollection

MANAGEMENT OF ENT FOREIGN BODY

Foreign Body Ear

- Foreign bodies may be inanimate or live
- Inanimate may be vegetative and non-vegetative
- Immediate removal is o indicated when the foreign body is corrosive e.g. button battery, or vegetative.
- Any live insects should be killed by drowning before removal (use oil, normal saline, lignocaine solution, a struggling insect can cause trauma to the tympanic membrane and ear canal
- Syringing is an easy, non-traumatic method of removing foreign bodies. Use body temperature sterile water to prevent caloric effects.
- It should be attempted only if there is space around the foreign body
- There should not be any external or middle ear infection
- Syringing should not be done in case of vegetative matter as it can swell on absorbing water and get impacted
- Any removal should be attempted under good illumination
- Patient should be referred to higher center if 2 -3 attempts are unsuccessful before further trauma is caused

Foreign Body Nose

- Unilateral foul-smelling discharge is foreign body unless proven otherwise!
- Corrosive objects like button battery needs immediate removal
- Instill nasal decongestant drops with local anesthetic into nose to shrink the nasal turbinate's
- Children should be held firmly to immobilize them
- Removal should be done in sitting position and not supine to prevent aspiration of foreign body.
- Good illumination is required before attempt at removal
- A blunt and curved instrument should be introduced beyond the foreign body to extract the foreign body through the nostril
- In case of trauma to nasal mucosa, normal saline drops should be prescribed to prevent adhesions of the mucosa

Foreign body aero-digestive tract

Throat-

- If the foreign body is visible then it may be removed using good illumination, tongue depressor and forceps.
- Fish Bone usually lodge in Tonsils, Vallecula, and pyriform fossa.

Larynx/ Hypopharynx-

- Confirm foreign body by - Proper history
- Examination- X–ray Neck AP/Lateral– radio-opaque foreign bodies may be seen
- If foreign body can be confirmed then the patient should be referred to higher center for removal

- If foreign body cannot be confirmed then symptomatic treatment may be given, sometimes trauma to the mucosa can give the sensation of foreign body
- If the sensation persists then the patient may be referred

Esophagus-

- Confirm foreign body by – Proper history
- X-ray – AP and lateral views should be taken
- Widening of prevertebral Shadow is the most important sign
- Don't confuse with hyoid bone, calcified thyroid cartilage.
- Upper GI endoscopy where available may be done to confirm Rigid esophagoscopy and removal is the definitive management.
- **Refer to higher center for removal if foreign body can be confirmed/in Doubt.**

Trachea/ Bronchus-

- Confirm foreign body by – History of foreign body inhalation. Initial Chocking, coughing, cyanosis may be followed by asymptomatic period of few months before blood stain sputum comes.
- Examination – auscultation may reveal
- Reduced air entry
- Rhonchi like breath sounds
- X-ray – any shadow within the trachea – bronchial air shadow can indicate a foreign body. Collapse consolidation may be there.
- Initial management consists of blows between shoulder blades or Heimlich maneuvers.
- Upon confirmation, parenteral antibiotics and steroids should be administered to prevent infection and to reduce inflammation.
- Patient should then be referred to higher center for removal.