Nasal obstruction in children

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Function of the nose

- Airway
- Cleaning
- Immunological protection
- Humidification
- Smell and taste
- Vocal resonance
Anatomy
Anatomy
Cadaver section
Endoscopic exam nasal cavity
Figure 26: Pediatric Airway
Anatomy of pediatric airway

- Epiglottis (floppier, u-shaped)
- Hyoid bone
- Tongue
- Airway (more anterior and higher)
- Vocal cords
- Thyroid cartilage
- Cricoid ring (Narrowest)
- Trachea (more flexible)
- Funnel
- Posterior
- Anterior

SUSAN GILBERT
Children First
History

- Onset and progress
- How long and how severe
- Snoring /stertor/stridor
- Discharge
- Feeding and growth
- Sleep disturbance
- Masses
- Cardiopulmonary
- Associated symptoms
Examination
Airway assessment
Stertor
Stridor
Aetiology

• Congenital
• Acquired
  – Inflammatory
  – Traumatic
  – Neoplastic
  – Infective
Congenital

- Birth trauma
- Facial hypoplasia
- Nasal stenosis
- Choanal atresia
- Neoplasms
- Encephaloceles
Facial hypoplasia
Pyriform aperture stenosis
Choanal atresia
Drill out and stenting for choanal atresia
Unilateral choanal atresia
Congenital “neoplasms”
Congenital “neoplasms”
• Very common
• Older children
Post nasal space mass
Encephalocele
Acquired

- Very common
- Older children
Acquired

- Foreign bodies
- Adenotonsillar hypertrophy
- Allergic rhinitis
- Chronic rhinosinusitis
- Antrochoanal polyps
Antrochoanal polyp

- Inflammatory polyp
- Unilateral
- Older child
- From one of the maxillary sinuses
Antrochoanal polyp
Debriding polyp
Adenoidal hypertrophy

- Very common
- 6 months - 4 years
- Involute as maturity reached
- Major immune function
  - Production of secreted IgA1 and IgG
  - Protect upper respiratory tract
  - Airborne viruses and bacteria
- Usually associated with tonsillar hypertrophy
Adenoidal hypertropy
Adenoidal hypertropy
Adenoidal hypertrophy

- Sleep disordered breathing
- Weight up obstruction vs. Immune function
UAO and GORD

-ve airway pressure

Oedema of airway

GORD

UAO
Laryngopharyngeal reflux
Allergic Rhinitis
Allergic rhinitis
Inferior turbinectomy
Indications for inferior turbinectomy

• Complete nasal cavity obstruction
• Resistant to maximal medical therapy
• Known complications
• Benefit vs risk
Summary

• Nasal obstruction is common
• History and examination
• Flexible nasoendoscopy
• Reflux
• Maximal medical therapy
• Surgery: benefit vs risk