CROUP

BY

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INTRODUCTION

- Upper respiratory infection
- Lower respiratory infection
  - Supraglottic
  - Glottic
  - subglottic
Acute Respiratory Infections (ARI): Clinical syndromes

Upper respiratory tract
- Nasal cavities
- Tongue

Lower respiratory tract
- Eustachian tube
- Pharynx
- Epiglottis
- Larynx
- Esophagus
- Trachea
- Left lung
- Left bronchus
- Small bronchi
- Bronchioles
- Alveoli
- Diaphragm

Acute upper respiratory infections (AURI)
- Cold
- Otitis media
- Pharyngitis

Acute lower respiratory infections (ALRI)
- Epiglottitis
- Laryngitis
- Laryngotracheitis (Conditions causing Stridor)
- Bronchitis
- Bronchiolitis
- Pneumonia
- Croup
Definition

- Heterogeneous group of acute infectious process
  - Bark like or brassy cough
  - Inspiratory stridor
  - Respiratory distress
Croup Syndrome

- 1- Laryngotracheobronchitis
- 2- Acute Epiglottitis
- 3- Acute infectious laryngitis
- 4- Spasmodic Croup
Etiology

- Viral infection
  - Parainfluenza…75%
  - Influenza
  - Adenovirus
  - Respiratory syncytial virus
  - Measles
- Mycoplasma
- **Age**
  - 3 m – 5 yr peak age 2 years
- **Male**
- **Winter & fall**
- **Recurrent attacks frequent from 3-6 yrs**
- **Strong family history**
Clinical features

- Rhinorrhea
- Pancytis
- Mild cough
- Low grade fever
- Brassy cough
- Inspiratory stridor
- Respiratory distress
- Sits up & held upright
- Worse at night
- Symptoms may resolve within a week
- Family members may have mild respiratory illness
Signs

- Slightly increased respiratory rate
- Normal to moderately inflamed pharynx
- Signs of respiratory distress
- Stridor
Diagnosis

- Clinical
- X–Rays neck ....
  - Steeple sign
  - Subglottic narrowing
Treatment

- Mist / steam therapy
  - Moistens airway secretions
  - Sooths inflamed mucosa provide comforts

- Nebulized epinephrine
  - 0.25 ml in 3 ml of normal saline every 20 min
Steroids are beneficial
  * Dexamethasone 0.6 mg/kg
  * Nebulized budesonide
No antibiotics
Hospitalized if
  * Progressive stridor
  * Stridor at rest
  * Respiratory distress
  * Cyanosis
  * Depressed mental status
Acute Epiglottitis:

- Potentially lethal condition
- Acute fulminating course
Clinical feature

- High fever, sore throat, dyspnoea
- Rapidly progressing respiratory obstruction
- Toxic
- Dysphasia
- Drooling & Hyperextended neck
- Tripod position
- Restlessness
- Stridor is a late finding
- Barking cough is rare
- No family member is ill
Diagnosis:

- Cherry red” swollen epiglottis
- X-ray neck lateral – swollen epiglottis (Thumb sign)
- Lucocytosis
Treatment:

- Medical emergency
- Establish an airway
  - Nasotracheal intubation
  - Tracheostomy
- Oxygen
- Antibiotics
  - Ceftriaxone or cefotaxime
  - Ampicillin + salbectam
Complications

- Pneumonia
- Cervical lymphadenopathy
- Otitis media
- Meningitis
- Arthritis
Acute infectious laryngitis

- Viral infection
  (Diphtheria is an exception)

- Sore throat, cough
  * Hoarseness and **loss of voice** out of proportion to systemic features

- Physical examination is unremarkable

- Laryngoscopy shows edema of vocal cords and subglottis tissue
Spasmodic Croup

- **Age:** 1-3 yr
- **No prodrome**
- **No positive family history**
- **Cause is viral or allergic**
- **Attacks are sudden and at night**
- **Child awakens with barking cough**
- **Stridor and hoarseness**
- **Improves within hours**
**Differential Diagnosis**

- Bacterial tracheitis
- Diphtheritic croup
- Measles croup
- Foreign body aspiration
- Retropharyngel or peritonsillar abscess
- Angioedema
- Hypocalcemic tetany
Prognosis

- Excellent outcome
- Increase mortality
  - Laryngeal obstruction
  - Complications of tracheotomy
- Untreated epiglotitis
  - 6% mortality
Thankyou