

Upper Respiratory Infections: Common Cold, Sinusitis, Pharyngitis, Epiglottitis and Laryngotracheitis

Biomedical Engineering - URJC

Rafa Carretero, MD, PhD

Internal Medicine Department

7 February 2024

Contents

- 1 Introduction
- 2 Common cold
- 3 Sinusitis
- 4 Pharyngitis
- 5 Croup

Summary (I)

- Most upper respiratory infections are **viral**, exceptions are epiglottitis and laryngotracheitis often caused by *Haemophilus influenzae* type B.
- **Bacterial pharyngitis** typically caused by *Streptococcus pyogenes* (group A beta-hemolytic streptococci).
- Entry through inhalation of droplets, leading to mucosal invasion.

Summary (II)

- Symptoms range from runny nose and sneezing (common cold) to severe cases with breathing difficulties in children (epiglottitis and laryngotracheitis).
- Diagnosis through clinical recognition and cultures; viral infections treated symptomatically.
- **Streptococcal** pharyngitis and *H. influenzae* type B infections treated with **antibacterials**.
- *H. influenzae* type B vaccine part of childhood immunization.

Introduction

- Upper Respiratory Infections are categorized by symptomatology and anatomic involvement.
- Acute infections includes common cold, pharyngitis, epiglottitis, and laryngotracheitis.
- Usually **benign**, transitory, and **self-limited**, except for serious cases in children (epiglottitis and laryngotracheitis).
- Etiologic agents: **viruses**, **bacteria**, mycoplasma, and fungi.
- More common in fall and winter due to school start and indoor crowding.

Common Cold

- Self-limited inflammation of upper respiratory tract mucosa.
- Symptoms include sore throat, sneezing, blocked/runny nose, headache, cough, malaise, and low-grade fever.
- Diagnosis is clinical; more than 200 virus subtypes associated.
- Treatment is symptomatic with decongestants, antipyretics, fluids, and rest.
- No vaccine for cold prophylaxis; antibiotics not recommended.

Common cold

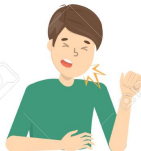
SYMPTOMS OF COLD



SNEEZING



SORE THROAT



MILD COUGH



RUNNY NOSE



LOW-GRADE FEVER

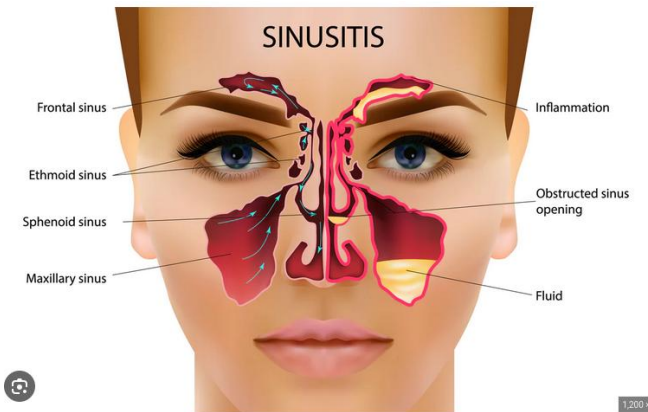


WATERY EYES

Sinusitis

- Symptomatic inflammation of nasal cavity and paranasal sinuses.
- Majority of cases viral; bacterial agents include *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis*.
- Symptoms: purulent nasal drainage, nasal obstruction, facial pain/pressure/fullness.
- Self-limiting; symptomatic therapy recommended.
- Antimicrobial therapy with amoxicillin-clavulanate or cephalosporin may be used.

Sinusitis

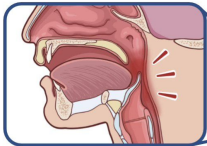


Pharyngitis

- Acute onset of sore throat; bacterial aetiology if absence of cough, nasal congestion, and discharge.
- Caused by various viral and bacterial pathogens, including Group A beta-hemolytic Streptococcus (GAS).
- Diagnosis: clinical and rapid antigen detection tests for GAS pharyngitis.
- Self-limiting; treatment involves supportive care and antibiotics for GAS infections.

Pharyngitis

PHARYNGITIS (SORE THROAT)



* INFLAMMATORY DISEASE
of PHARYNX (back of throat)



MOST OFTEN CAUSED by:



* VIRUS



* BACTERIA

RARELY:

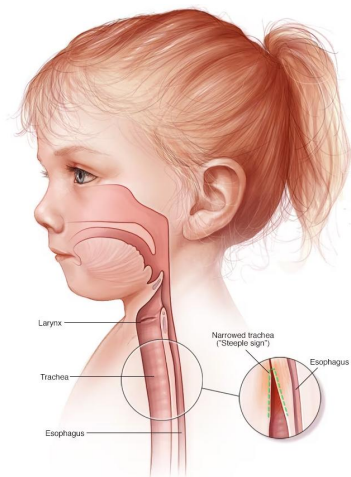


* FUNGI

Epiglottitis and Laryngotracheitis

- Epiglottitis: infection of supraglottis, potentially causing airway compromise.
- Laryngotracheitis (croup): infection of upper airway, common in children.
- *Haemophilus influenzae* type B common cause of epiglottitis; viruses often cause laryngotracheitis.
- Epiglottitis is an airway emergency, especially in children.
- Diagnosis through clinical manifestations; *Haemophilus influenzae* type B vaccine recommended for prevention.

Croup



© MARYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.