

الحمد لله
الكرمين

Epiglottitis



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Definition

Acute, life-threatening infection, consisting of cellulitis of the epiglottis and resulting in critical narrowing of the airway.

Progresses rapidly (less than 12 hours from onset to respiratory distress).

Usually occurs in children 3-7 years old.

Children inadequately immunized against *Hemophilus influenzae* type B may be particularly susceptible.

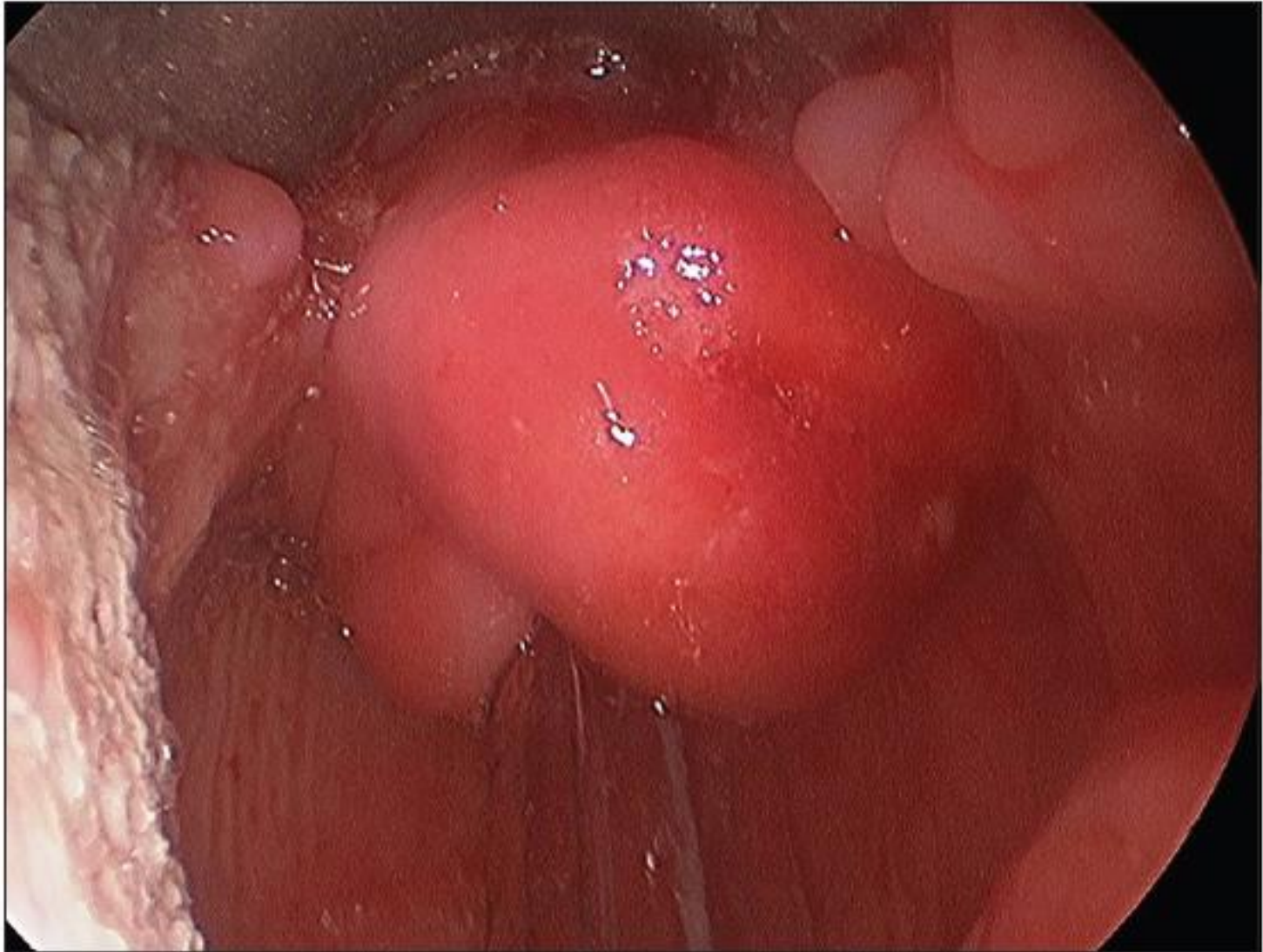


Figure 3: Inflammatory edema of the arytenoids, aryepiglottic folds and the epiglottis. Tracheal intubation of a patient with epiglottitis must be regarded as a potentially difficult procedure

Definition

Risk Factors of epiglottitis

Factors that can increase your chances of developing epiglottitis are:

- **A weak immune system**
- **Lack of necessary and adequate vaccination in children**

Etiology

Usually a bacterial infection:

- *Hemophilus influenzae* type B (accounted for more than 90% of cases before vaccines were introduced, but is now rare)
- *Staphylococcus aureus*
- *Streptococcus pneumoniae*
- *Streptococcus pyogenes*, group A

History

- Abrupt onset
- Limited or no prodrome
- High fever ($>39^{\circ}\text{C}$)
- Sore throat with drooling
- Dysphagia
- No cough, runny nose or other symptoms of URTI

Diagnostic Tests

Ensure that enough oxygen is getting through by using an oximeter. Then run the following tests

- ❖ Blood test
- ❖ Throat examination
- ❖ Throat culture
- ❖ Chest or neck X-Ray



Figure 1: The radiological “thumb sign” in acute epiglottitis

Physical Findings



Do not attempt to examine oropharynx, since this may provoke **sudden obstruction**.

Physical Findings

- ✓ Child looks acutely ill and anxious
- ✓ • High fever
- ✓ • Cyanosis
- ✓ • Slow, labored breathing
- ✓ • Suprasternal in drawing
- ✓ Drooling
- ✓ • Child will not talk and sits erect in the classic "sniffing" position, leaning forward with hyperextension of the neck
- ✓ • Stridor relatively quiet, given the degree of distress
- ✓ • Breath sounds normal, with transmitted stridor
- ✓ • Air entry reduced

Differential Diagnosis

❖ Croup

- ❖ • Bacterial tracheitis
- ❖ • Peritonsillar or retropharyngeal abscess
- ❖ • Uvulitis
- ❖ • Diphtheria
- ❖ • URTI in the presence of congenital or acquired airway disease (e.g. subglottic stenosis or laryngeal web)

Complications

- Complete obstruction of airway causing respiratory arrest, hypoxia and death
- Sepsis
- Septic shock

Complications

Table 10-5: Comparison of epiglottitis and croup

Feature	Epiglottitis	Croup
Age	2 – 8 years	6 months to 6 years
Onset	Acute	Gradual; child often has a cold first
Temperature	High ($> 39^{\circ}\text{C}$)	Low ($< 38^{\circ}\text{C}$)
Swallowing	Difficulty; salivation	No difficulty
Position	Sitting up, leaning forward	variable

Management

Adjuvant Therapy

- **Give oxygen by mask** at 6-10 L/min or more, unless this is distressing to the child
- **Oxygen by nasal prongs** at 2-4 L/min may be less distressing
- Start **IV therapy** with normal saline to keep vein open, unless this is likely to distress the child and thereby to increase respiratory distress

Management

Nonpharmacologic Interventions

- Nurse the child in the **parent's or caregiver's arms**
- **Give nothing by mouth**
- Allow the child to assume any **position** that makes him or her comfortable

Management

Pharmacologic Interventions

- Administration of antibiotics effective against *H. influenzae* should be started before transport, if possible.
- *Cefotaxim* 150 mg/kg per day, divided q8h, IV
- *Ceftriaxon* 100 mg/kg per day, divided q12h, IV
- *cefuroxime* 150 mg/kg per day, divided q8h, IV

Management

Rifampin prophylaxis

Rifampin prophylaxis (20 mg/ kg daily in a single dose for 4 days)

is recommended for the child and for family, household and possibly daycare contacts

