

Acute epiglottitis

A baby is given oxygen therapy to improve breathing and circulation in epiglottitis



WHAT IS IT?

- Acute epiglottitis is a rapid-onset bacterial infection that results in sudden inflammation of the epiglottis and the tissues around the epiglottis.
- It can lead to blockage of the upper airway and death.
- It mainly affects children but can be contracted by adults. However, it is now rare in the UK as a result of vaccination.

SYMPTOMS

- The most common symptoms include the sudden onset and rapid progression of:
 - Severe sore throat;
 - Fever;
 - Dysphagia.
- Other signs and symptoms include the following:
 - Dyspnoea;
 - Stridor;
 - Dysphonia;
 - Drooling;
 - Tachycardia;
 - Tachypnoea;
 - Hypoxia;
 - Cough.
- If the airways become totally blocked and emergency treatment is not provided, acute epiglottitis can be fatal.

CAUSES

- Acute epiglottitis is contracted through the respiratory tract and is most commonly caused by the bacterium *Haemophilus influenzae* type B (Hib). It can also be caused by *Streptococcus pneumoniae*, *Staphylococcus aureus* and group A beta haemolytic streptococci.
- It spreads down from the epiglottis into the vallecula, arytenoids and aryepiglottic folds, resulting in cellulitis with inflammation and swelling.
- As the tissues swell they obstruct the glottic opening, causing breathing difficulties.
- As the airway is obstructed, breathing becomes more difficult, eventually resulting in retention of carbon dioxide and hypoxia. It also becomes much more difficult to expel mucus.
- This combination of factors can result in fatal asphyxia within a few hours if not treated.

DIAGNOSIS

- Diagnosis is often established following an examination.
- A throat swab may be taken to test for the presence of bacteria.
- Blood tests can establish the presence of bacteria or an increase in white blood cells.
- X-ray can show enlargement of the epiglottis.
- A nasopharyngoscopy can illustrate swelling in the throat.
- Croup (viral laryngotracheitis) is a common misdiagnosis but the onset of croup is more gradual and dysphagia is absent.

TREATMENT

- This will vary according to severity but immediate hospital treatment should be sought.
- Oxygen therapy improves breathing and circulation.
- In severe cases the patient may need a ventilator. A tracheostomy may be performed if the swelling has blocked the windpipe.
- Steroids or bronchodilators given through a nebuliser may help reduce swelling and disperse mucus.
- Antibiotics will reduce infection.
- IV steroids can reduce swelling around the windpipe.

- IV fluids are used in order to address dehydration.
- Most children recover in about seven days. Adults usually take a little longer.
- The infection is easily transmitted, so other family members should be screened and may be given an antibacterial to prevent further infection, especially if they are in close contact with children.
- Infants in the UK are now vaccinated against Hib. This has resulted in a dramatic fall in cases and the incidence is now one to four cases per 100,000.

REFERENCES

- Katori, H., Tsukuda, M. (2005) Acute epiglottitis: analysis of factors associated with airway intervention. *The Journal of Laryngology and Otology*; 119: 12, 967-972.
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