Acute epiglottitis in an adult

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Summary
A 33-year old man developed acute epiglottitis of sudden onset which resulted in severe respiratory distress. A small endotracheal tube was passed as an emergency procedure. Respiratory arrest developed after he pulled it out 12 hr later. Subsequent progress was satisfactory following endotracheal intubation and treatment with ampicillin and hydrocortisone. Blood cultures grew Haemophilus influenzae.

Introduction
Acute epiglottitis is a severe bacterial infection, potentially fatal within a few hours of onset. It occurs mainly in infants and pre-school children (Addy, Ellis and Turk, 1972) but also in adults, although less frequently (Editorial, 1969). Until recently, reports have been few. Authors have stressed the rapidity of its course and its high mortality rate even in adults (Kander and Richards, 1977). In order to stress the need for widespread awareness of this condition in adults, the following case is presented.

Case report
A 33-year-old man was admitted to the Sunderland General Hospital at 8 a.m. with a history of sudden onset of dyspnoea and a feeling of blockage in the throat at 1 a.m. There had been no history of fever, sore throat, headache or myalgia. In the past he had suffered from hay fever in summer months. Shortly after admission, he was noted to be cyanotic with severe inspiratory stridor and wheezing.

On examination he was orthopnoeic and cyanosed, unable to speak, with inspiratory stridor and a fever of 38.5°C. He was intubated on the ward with a narrow gauge (No. 7), uncuffed, endotracheal tube with great difficulty as the glottic opening was virtually occluded by marked swelling of the epiglottis and oedematous epiglottic folds. He was then transferred to the Intensive Therapeutic Unit. There he was sedated with 1–2 mg of phenoperidine i.m. 4–6 hourly and 15 mg papaveretum i.m. 6 hourly. The mucous membranes in the pharynx were hyperaemic. Indirect laryngoscopy showed a red and grossly swollen epiglottis. A few hours later the patient pulled out the endotracheal tube following which respiratory arrest rapidly ensued. This was again successfully managed with endotracheal intubation.

The initial WBC count was 1.5 x 10⁹/l with marked shift to the left, and toxic granulation. Differential count showed 82% neutrophils and 18% lymphocytes, platelets 225 x 10⁹/l. Chest X-ray was negative. Quantitative immunoglobulins were IgA 1.95 g/l; IgM 1.45 g/l; and IgG 5 g/l. Laryngeal swab was negative but blood culture grew Haemophilus influenzae sensitive to ampicillin. The patient was treated with ampicillin 500 mg 6-hourly i.m. for the first 48 hr then orally for one week. Intravenous hydrocortisone in a dosage of 200 mg 4-hourly was added initially to reduce the laryngeal oedema and continued for 48 hr. He remained pyrexial for 48 hr during which WBC went up to 21.0 x 10⁹/l and he developed crepitations at both lung bases. After 48 hr, indirect laryngoscopy showed a completely normal epiglottis and the patient was extubated. There were no respiratory problems after extubation. The patient’s temperature and WBC came back to normal levels and he was discharged 10 days after admission.

Discussion
Acute epiglottitis is fortunately rare in adults (Editorial, 1969). Nevertheless, its explosive presentation and rapid progression to fatal respiratory failure, if untreated, should compel physicians to familiarize themselves with this potentially curable disease. The diagnosis of acute epiglottitis should be considered in any adult with sore throat and dysphagia of a degree disproportionate to the relatively mild signs of pharyngitis. Dysphagia accompanied by inspiratory stridor comes on suddenly and increases with alarming rapidity over
the ensuing hours. Restlessness and prostration are pronounced features. Indirect laryngoscopy shows typically cherry red and oedematous epiglottitis with extension of oedema into the aryepiglottic and interarytenoid folds (Editorial, 1969). Death from respiratory obstruction may follow signs of respiratory distress within 6 hr; *H. influenzae* is by far the commonest organism (Gorfinkel, Brown and Kabin, 1969). Other pathogens (in decreasing order of frequency) are Group A haemolytic streptococci, *Staphylococcus aureus* and pneumococci (Bass, Russel and Wiebe, 1974). Blood cultures should be obtained in addition to a pharyngeal swab as septicaemia is a frequent complication. Maintenance of a clear airway either by nasotracheal intubation or tracheostomy is mandatory, but the problem of when to do a tracheostomy is a difficult one (Editorial, 1969). Ampicillin is the initial antibiotic of choice. The early use of steroids is generally recommended (Morgenstein and Abramson, 1971), although its place remains controversial (Fearn and Bell, 1975). Recognition of this respiratory emergency in adults, and prompt intervention would substantially reduce mortality.

**References**


