

ADULT ACUTE EPIGLOTTITIS - A RARE HAPPENING

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INTRODUCTION

Acute epiglottitis is a well-recognised life threatening infectious disease of children. However its prevalence in adults is so rare that most of the doctors are unaware of its existence, and still fewer may have had an experience of seeing a case. Therefore inability to even suspect such a disease in adult patient leads to failure in diagnosis of epiglottitis which in turn contributes to its continuing morbidity that may thus be much higher than in children. The diagnosis of acute epiglottitis in the adult population is difficult as respiratory distress may be absent [1]. There is a reported increase in the incidence of epiglottitis in the adult population [2]. In contrast to the aggressive management of epiglottitis in children; a more conservative approach has been advocated in adults [3]. We report a case of adult epiglottitis seen in ENT department of CMH Lahore.

CASE REPORT

A 45-year-old gentleman, labourer by profession presented to ENT out patient department with 3 days history of throat pain, hoarseness of voice and odynophagia associated with low-grade fever of 2 days duration. Hoarseness was insidious in onset and was rapidly getting worse. There was no respiratory distress.

On physical examination, the patient was not in respiratory distress. He was febrile (99.4°F), tachycardiac (100 bpm), and tachypnoeic (24 bpm); however, his blood pressure was stable at 130/70 mm Hg and his oxygen saturation on room air remained above 90%. There was no trismus. Inspection of the sublingual region did not reveal edema or erythema. Oropharyngeal examination revealed mild diffuse congestion of the walls.

Indirect laryngoscopy (IDL) revealed grossly swollen, hyperemic and angry looking epiglottis obscuring the view of the glottis. Examination of his neck demonstrated bilateral anterior cervical chain lymphadenopathy with tenderness to palpation. There was no evidence of meningism or cellulitis of the neck. Auscultation of his chest demonstrated normal inspiratory sounds over the chest. His heart examination revealed tachycardia with normal S1 and S2 sounds, and no evidence of murmurs, rubs, or gallops. Patient's neurological and other systemic examinations were unremarkable.

Patient's blood examination showed significant leukocytosis (WBC- 20700/cmm neutrophils-80%, Bands-6%). Throat culture was negative. Plain X-ray chest was normal. However, plain X-ray lateral view of neck revealed swollen epiglottis almost touching posterior pharyngeal wall [Fig 1] with classical 'Thumb print sign' [Fig 2].

On the basis of indirect laryngoscopy and X-ray findings patient was diagnosed as a case of acute epiglottitis and was kept in intensive care unit of the hospital to watch for any respiratory difficulty. Patient was started on intra-venous ceftriaxone - 1 gram BD, steam inhalations and supportive treatment. A tracheostomy set was also placed at bedside to cater for any emergency airway situation that may arise. While in the ICU, the patient never experienced severe respiratory compromise. By day two of hospitalization, the patient reported minimal improvement in his odynophagia. A repeat laryngoscopy demonstrated minimal change from prior inspection. Improvement in phonation and odynophagia occurred on 4th day of admission. By day seven of hospitalization, there was marked improvement in symptoms and signs, with diminished swelling of the epiglottis on follow up laryngoscopy. The patient was shifted from ICU to general ward

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on 7th day of admission. Patient was discharged on 10th day of admission in stable condition with instructions to complete a total of 14 days of antibiotic therapy.

DISCUSSION

Acute infective inflammatory diseases of the upper airway are anatomically distinct: laryngotracheitis, or viral croup, affects structures below the glottis, while laryngitis of the glottis (which is common) and supraglottitis (which is rare) affect the structures above. The term epiglottitis is often used instead of supraglottitis, but the aryepiglottic folds and arytenoid soft tissues may be affected as well as the epiglottis [4].

Epiglottitis (also known as Supraglottitis in adults) while rare (i.e. 9.7 cases per million adults in the U.S) [1] can be life threatening if not diagnosed and treated promptly. There is a slight male predominance in a ratio of 3:2 [4]. Most adult cases lie between 20-50 years [5]. The mortality rate can be as high as 17.6% if respiratory distress is one of the presenting symptoms. The common presenting symptoms include dysphagia or odynophagia, dysphonia, drooling, and respiratory distress. Haemophilus influenzae type B is found in as few as 17% of adult patients with suspected epiglottitis [6]. There is also a high rate of negative blood cultures possibly suggestive of a viral cause (although only herpes simplex has been reported). Meningococcal epiglottitis is extremely rare [7]. Alternatively, epiglottitis may occur following mechanical injury such as the ingestion of caustic material or the inhalation of hot objects, smoke or vapours. Epiglottitis following illicit drug use has been described as a result of the accidental inhalation of a heated object [8]. Although there has been an association with cigarette smoking [9], there are no reports linking epiglottitis and the smoking of heroin. The causal organism or factor is, therefore, often less identifiable in adults than in children.

The diagnosis of epiglottitis is essentially clinical but can be supported by indirect laryngoscopy. Typically, there is diffuse

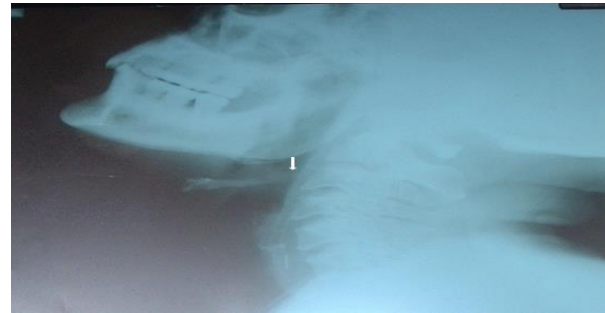


Fig 1: Note the arrow pointing to swollen epiglottis, which is almost touching the posterior pharyngeal wall.

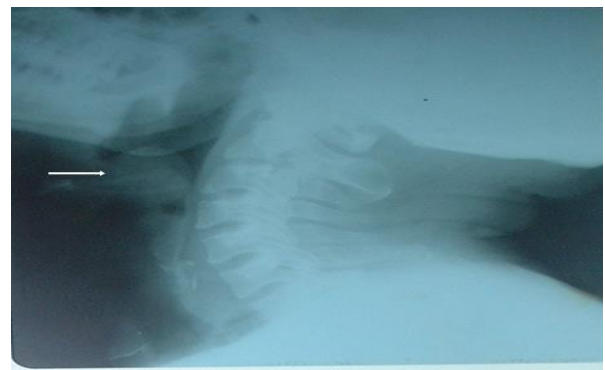


Fig 2: Note the arrow pointing to the 'Thumb print sign', Classical sign of Acute Epiglottitis.

swelling of the supraglottic structures unlike the classic cherry red epiglottis in children. Once the airway is deemed safe, a lateral, soft tissue radiograph is done which may show a thickening of the epiglottis ('Thumb print' sign); Ducic and colleagues have proposed the 'Vallecula sign' to improve the diagnostic accuracy of soft tissue radiographs [10]. This stepwise approach attempts to identify the vallecula as it nears the level of the hyoid bone. In the absence of a 'deep and well-defined vallecula', the radiological findings support the diagnosis of epiglottitis [11].

If the clinical diagnosis of epiglottitis is made, treatment should begin promptly with intravenous antibiotics. Steroids have no accepted place and the benefit of epinephrine, either nebulized or intramuscular, has yet to be confirmed.

If airway obstruction is a prominent symptom, orotracheal intubation or tracheostomy may be performed under local anesthesia but both are potentially hazardous procedures as they may precipitate sudden loss of the airway

Respiratory distress, stridor, sitting erect, inability to swallow secretions and deterioration within 8–12 hours are the major signs and symptoms associated with the need for intubation. When in doubt early intubation is the safest approach to preventing death.

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