

Acute epiglottitis from corrosive ingestion

Sir,

Acute epiglottitis (AE) constitutes a medical emergency and most often results from infection with *Haemophilus influenzae*. Corrosive ingestion is a rare and hence less appreciated cause of AE.

A 40-year-old female was brought to the emergency department following suicidal ingestion of about 100 ml of liquid toilet cleaner HARPIC™, containing 10.5% hydrochloric acid. She complained of dyspnea, dysphagia, odynophagia, difficulty in speaking and drooling. She was noted to have hoarseness of voice, respiratory distress with stridor and cyanosis. Examination revealed oral burns, cyanosis and crackles at both lung bases. A lateral soft tissue X-ray of the neck showed “thumb sign” [Figure 1], suggesting AE. She was kept nil per oral and managed with supplemental oxygen, nebulized budesonide and adrenaline, intravenous fluids and antibiotics. Orotracheal intubation was required after 48 h for worsening stridor and hypoxemic respiratory failure, and mechanical ventilation was initiated. Enlarged and inflamed epiglottitis was confirmed by direct

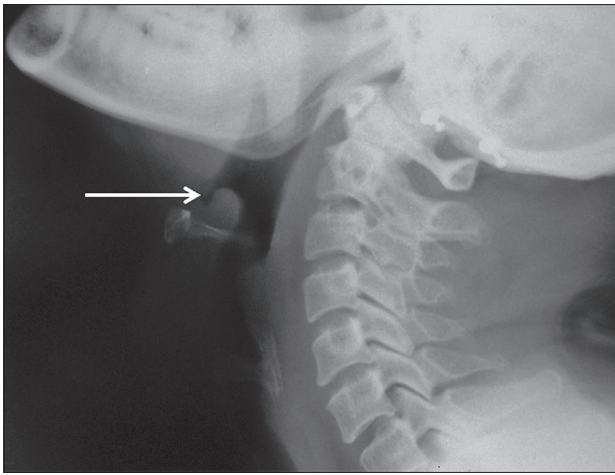


Figure 1: Lateral soft tissue radiograph of the neck showing “thumb sign” (arrow), suggesting a severely inflamed, oedematous and enlarged epiglottis

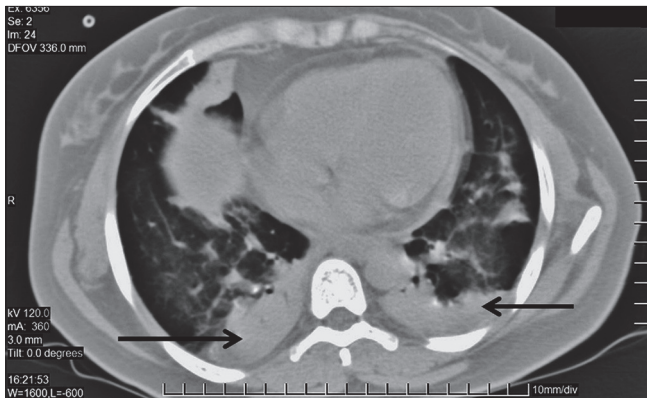


Figure 2: Contrast-enhanced computed tomography of the chest (lung window), showing areas of consolidation (black arrows) in both lungs, suggesting aspiration pneumonia

laryngoscopy during intubation. Contrast-enhanced computed tomography of the chest showed areas of consolidation in the right middle and lower lung lobes and left lower lobe [Figure 2], suggesting aspiration pneumonia. She required mechanical ventilation for a week and was subsequently extubated.

“Thumb sign” in lateral soft tissue radiograph of the neck indicates a severely inflamed, edematous and enlarged epiglottis, resulting most commonly from infections with *H. influenza* - type b and Group-A β -hemolytic Streptococci.^[1] However, corrosive injury is a rare cause of AE.^[1] Along with epiglottitis, rest of the supraglottic area including the vallecula, aryepiglottic folds and arytenoids are also inflamed and edematous and hence life-threatening acute upper-airway obstruction may develop rapidly.^[2] Thus, AE constitutes a medical emergency. In a study involving AE patients,^[3] positive “thumb sign” on lateral neck radiograph and stridor were significant predictors of requirement for airway intervention and hence their presence should warn of

imminent upper-airway occlusion. Timely fiberoptic nasotracheal or less preferably orotracheal intubation by a skilled anesthetist or tracheostomy may be required for securing the airway. Adjunctive measures to reduce upper airway edema in AE include intravenous dexamethasone, nebulized budesonide and intravenous antibiotics.^[1]

Aspiration pneumonia and acute respiratory distress syndrome are known complications of corrosive ingestion. In a study of 273 adult patients of caustic ingestion reported from Taiwan,^[4] 11% had aspiration pneumonia and 8% had respiratory failure. In corrosive ingestion, presence of upper airway compromise with stridor, along with dysphagia, odynophagia, voice change and drooling should raise suspicion of AE. Timely recognition of this complication and meticulous upper airway management may be lifesaving. Absence of radiological “thumb sign” should not rule out AE.^[5] In a clinically unstable patient with suspected AE, clinical stabilization and airway securement should get priority over X-ray imaging of the neck.

Kolar Vishwanath Vinod, Sadashivan Srikant, Muralidharan Siddarth

Department of General Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Dhanvantri Nagar, Puducherry, India

Correspondence:

Dr. Vinod Kolar Vishwanath,
Department of General Medicine,
Jawaharlal Institute of Postgraduate Medical Education and Research, Dhanvantri Nagar, Puducherry - 605 006, India.
E-mail: drkvv@rediffmail.com

References

1. Abdallah C. Acute epiglottitis: Trends, diagnosis and management. *Saudi J Anaesth* 2012;6:279-81.
2. Sack JL, Brock CD. Identifying acute epiglottitis in adults. High degree of awareness, close monitoring are key. *Postgrad Med* 2002;112:81-2, 85.
3. Chan KO, Pang YT, Tan KK. Acute epiglottitis in the tropics: Is it an adult disease? *J Laryngol Otol* 2001;115:715-8.
4. Cheng HT, Cheng CL, Lin CH, Tang JH, Chu YY, Liu NJ, *et al.* Caustic ingestion in adults: The role of endoscopic classification in predicting outcome. *BMC Gastroenterol* 2008;8:31.
5. Stankiewicz JA, Bowes AK. Croup and epiglottitis: A radiologic study. *Laryngoscope* 1985;95:1159-60.

Access this article online

Quick Response Code:



Website:

www.ijccm.org

DOI: 10.4103/0972-5229.138171