Asphyxia death caused by epiglottic abscess rupture in an adult: A case report

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Abstract: We report a case of Asphyxia death caused by epiglottic abscess rupture. Patient was initially managed as acute epiglottis with parenteral antibiotics, about two hours later, the patient died with bleeding from his nose and mouth. In this case, the patient exhibited a hemorrhage at the top of the epiglottic abscess by the abscess surface mucosa rupture (0.5cm×0.1cm). We reviewed this case with respect to the autopsy findings, pathological changes and circumstantial correlations of the investigation.

Key Words: epiglottic abscess, asphyxia death, autopsy, forensic pathology.
Figure. Autopsy revealed edema of epiglottis mucosa and surrounding tissue, hemorrhage of the epiglottic abscess surface and a lot of pink foamy liquid in the bronchi. A. A large amount of blood in the nasal cavity; B. Pink foamy liquid in the bronchi (white arrow); C and D. Severe laryngeal congestion and edema, epiglottis stenosis (white arrow); E. Epiglottic abscess nodule measuring 1.6 cm × 1.3 cm × 0.6 cm (white arrow) at the right side of the surface of epiglottis; F. Epiglottic abscess rupture measuring 0.5 cm × 0.1 cm (white arrow).
observed. Small amounts of hemorrhage were found in the myocardial interstitial. Parts of the myocardial fibers were wavy changed, small amount of fat cells and inflammatory cells were observed in myocardial interstitial. There was evidence of cerebral edema. The cause of death was deemed suffocation due to airway obstruction caused by epiglottic abscess rupture (0.5cm×0.1cm) (Fig. F), bleeding and severe laryngeal edema.

**DISCUSSION**

Acute laryngopharynx refers to the upper respiratory obstruction caused by various diseases which induce laryngostenosis or obstructive breathing difficulties. This symptom is more common in infants and young children, and also occurs in adults. It is a very critical condition that severe breathing difficulties would take place in a short time. Without timely treatment, some patients may die from suffocation. Many causes may contribute to laryngeal obstruction, including inflammation of the throat, allergic and certain systemic diseases, inhalation injury (inhalation hydrothermal hot toxic or irritating gases) etc [1].

About our case, five characteristics was discovered by autopsy as follows:

The deceased had an epiglottic abscess nodule (1.6 cm × 1.3 cm × 0.6cm) bleeding and laryngeal edema, in which large number of neutrophils were found.

The deceased had focal pulmonary congestion, edema, pulmonary hemorrhage, bronchospasm, etc, which were consistent with acute myocardial ischemic changes.

Multifocal hemorrhage in myocardial interstitial, wave-like changes of multifocal myocardial fiber and congestion of multiple tissues and organs were found. All of them were consistent with signs of acute respiratory and circulatory system failure.

No other lethal pathological changes and mechanical traumas were found during autopsy.

The risk factors for epiglottic abscess include age of onset, diabetes and the presence of foreign body [2]. Berger et al. reported that 10 of the 116 epiglottitis patients were diabetic, 16 of them had background disease [3]. The clinical features of epiglottic abscess include fever, odynophagia and hoarseness. Interestingly, airway obstructions rarely become the presenting symptom as compared to odynophagia and fever [4]. Therefore, CT examination is recommended for patients with a stable airway and swollen epiglottis, even if the swelling is not very obvious [5].

Although some patients did not have any symptoms of airway obstruction, the laryngoscopy findings which showed severely narrowed supralaryngeal airway warrant us to perform tracheostomy in order to establish airway as well as provide route for administration of anesthesia and drainage of the abscess. However, recent report suggested other methods of treatment to avoid tracheotomy. Kim SG et al. reported that 11 epiglottic abscesses were successfully treated with spinal needle aspiration that avoided the need for a tracheostomy [6]. At the same time, an iv antibiotics plus corticosteroids should be administrated the moment a suspicion of epiglottitis is present [7].

This case shows that in the course of clinical diagnosis and treatment of patients with sore throat, painful swallowing, the main symptoms of oropharyngeal mucosa if no obvious lesions, especially, when some patients do not complain of breathing difficulty or show sign of obstruction, all of them should be routine for indirect laryngoscopy to rule out the existence of acute epiglottitis, epiglottis abscesses and other emergencies adopted after diagnosis and effective treatment to avoid serious complications.
References