Acute Epiglottitis Complicated with Post-obstructive Pulmonary Edema

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A 27-year-old man visited the Emergency Department of a hospital due to the chief complaint of a severe sore throat for 1 day. He had no fever, rhinorrhea, or cough. Upon physical examination, he had his neck extended and was found to have clear breathing sounds. A lateral view neck X-ray showed a swelling in the epiglottal region (Fig. 1), and chest X-ray (Fig. 2) was normal. An otorhinolaryngologist was consulted.

During the nasopharyngealscopy, the patient suffered from an upper airway spasm and became cyanotic. As cardiac arrest was noted after the failure of airway intubation, emergency cricothyroidectomy was performed. A large amount of foamy sputum came out from the endotracheal tube, and the follow-up chest X-ray showed post-obstructive pulmonary edema (Fig. 3). The patient was transferred to the intensive care unit and was in a vegetative status for more than 6 months before he died.
Acute epiglottitis can be lethal if not treated aggressively. The patients always keep their necks extended or a tripod position. Interventions such as pressing the tongue base or performing nasopharygealscopy may trigger laryngospasm. Once the glottis is closed, negative intrathoracic pressure is generated, which will increase the pressure of venous circulation and thus creates a hydrostatic transpulmonary gradient with fluid moving from high pressure (pulmonary venous system) to low pressure (pulmonary interstitium and airspaces)\(^1\). Hypoxemia will occur if not treated promptly with airway management, fluid restriction, and diuretics. A surgical airway opening should be established immediately if airway intubation is suggested to be difficult.

**Reference**