

# Early morning upper airway discomfort and appearance on two X ray films

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## ABSTRACT

*We reported a case of reversible but severe upper airway stenosis. The patient complained of only slight discomfort in her throat after waking: she had a history of allergic reaction to contrast medium. Her X ray films showed severe edema in her pharynx. Epiglottitis was diagnosed and we started treatment. It should not be forgotten, that even mild symptoms, such as discomfort in the throat, could indicate the existence of severe epiglottitis.*

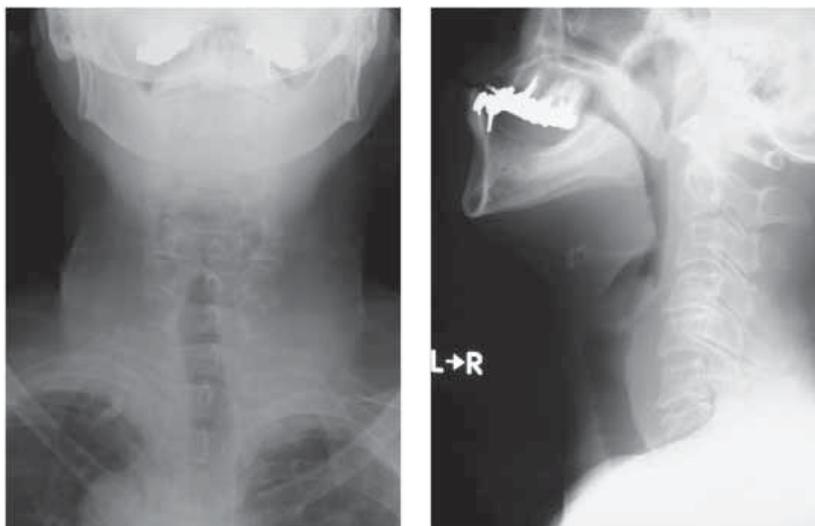
**Key words:** airway discomfort, airway stenosis, edema, epinephrine, steroids, epiglottitis

## Case Report

We encountered a case of severe but reversible laryngeal stenosis. The patient experienced a slight degree of difficulty with breathing and a discomfort in her throat upon awakening early one morning during February. She had a history of anaphylactic shock in response to the injection of contrast medium, but detailed data were not available at the time of examination. She had been experiencing these sensations for a few days, and her symptoms were similar to those she had felt prior to her previous anaphylactic reaction. She was transferred by ambulance to our hospital. Upon admission, the patient did not show any signs of wheezing or stridor and tracheal tug was not evident. At 5:50am X-ray films were taken and these showed edema in her pharyngeal region and epiglottitis was suspected (figure 1). An ER physician examined her larynx directly using a laryngeal scope and found that her vocal cords were difficult to visualize and were surrounded by edema. No

other anaphylactic symptoms, such as redness of the skin, itching, or hypotension, were observed. However, taking her past history of anaphylactic shock in response to the injection of contrast medium into account, an IV line was placed and steroids (Solu-Medrol®, 150 mg) and 0.3 mL of subcutaneous epinephrine were administered. Additional subcutaneous epinephrine was administered 15

minutes after the first administration in preparation for a tracheotomy. However, the degree of stridor could not be auscultated after the first or second administration of epinephrine, and her respiratory condition changed after pharmacological treatment. About 60 minutes after the start of treatment, an otolaryngologist examined the patient using a flexible fiberscope and found that the edema and stenosis had dis-



**Figure 1. Edema in the pharyngeal region and epiglottitis are visible. A thumbprint sign can be seen.**

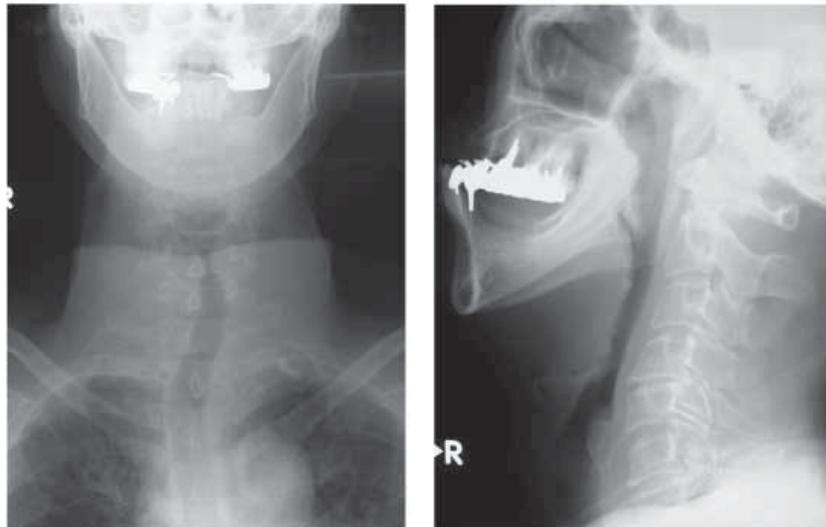
appeared; in particular, no signs of a tumor or other unusual findings were observed (figure 2). At 7 am, no signs of edema were visible.

## Discussion

Airway obstruction or stenosis can lead to lethal complications and can have many causes. (1-3) Epiglottitis can also have a lethal outcome. (4,5) Although a photograph is, unfortunately, not available in the present case, the following points can be made: 1) direct observation was performed using a laryngoscope, 2) stridor was not audible, 3) X-ray films showed edema in the pharyngeal region, 4) subsequent X-ray films showed the rapid disappearance of the edema, and 5) subsequent examination by an otolaryngologist produced no unusual findings; as a result, the stenosis and discomfort were thought to have been caused by epiglottitis. The most probable cause was a respiratory infection, since she had been suffering such symptoms for several days.

Epiglottitis can be lethal but in some cases it is only a non-specific finding. Even in the absence of severe symptoms, sudden and rapid clinical deterioration can occur. In some rare cases, like ours, airway problems can occur even though airway obstruction does not. In the present case, the patient's past history of anaphylactic shock prompted us to perform an X-ray, even though the patient's history probably did not have much influence on her present complaint. Nevertheless, we believe that the X-ray study enabled good decision-making and an excellent patient outcome.

In conclusion, we managed a patient with severe epiglottitis whose only com-



**Figure 2. The edema has disappeared. An examination using a flexible fiberscope also showed no signs of edema, though not seen here.**

plaint was throat discomfort. X-ray studies may be necessary in cases with a history of anaphylactic shock or even slightly suspicious throat discomfort. A laryngoscopic examination provided the information necessary for the ER physician to make decisions regarding

adequate treatment. However, direct observations and treatment (including X-ray examinations) should always be performed by experienced physicians, and the possible need for interventions like a tracheotomy should also be considered.

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