

Letter to the editor

Acute airway emergency caused by an organic foreign body located in the laryngeal mucosa

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INTRODUCTION

Organic material (e.g. nuts in children and bones or food in adults) is the most common foreign body inhaled by patients. Just one tenth of all foreign bodies in the airway are located in the larynx.^[1] Laryngeal foreign bodies among adults are rarely seen but can be a life threatening event requiring immediate lifesaving intervention.^[2,3] Here, we report an unusual case of a 56-year-old male patient presenting with sudden dyspnea due to a fulminant onset of massive laryngeal swelling. After securing the airway by tracheostomy, an organic foreign body (a fragment of the patient's own teeth) was successfully removed by direct laryngoscopy under general anesthesia.

CASE REPORT

A 56-year-old male was transferred from an external hospital, demonstrating sudden onset of massive laryngeal swelling, leading to a critical obstruction of the upper airway. The patient had a history of diabetes type II, arterial hypertension, reflux esophagitis as well as coronary heart disease with stent implantation one year ago (July 2014). Preoperatively, he had been taking the following medicines: Metoprolol 47.5 mg 1-0-1, Simvastatin 40 mg 0-0-1, Acetylsalicylic Acid 100 mg 1-0-0, Clopidogrel 75 mg 1-0-0, Phenprocoumon 3 mg, glimepiride 1 mg 0-1-0, Metformin 1000 mg 1-0-1, and Pantoprazol 40 mg 1-0-0. The initial treatment consisted of the intravenous administration of Prednisolone (Solu-Decortin® H) in a cumulative dose of 350 mg, Ranitidine 50 mg/5 mL and Dimetinden 4 mg/mL, but this was not sufficient to improve the patient's condition. And after transferring the patient to our clinic, the patient's

condition worsened, resulting in a life threatening situation with a dramatic loss of oxygen saturation (<70%) and subsequent fainting. In order to save the patient's life a coniotomy was immediately performed, after which a stable respiratory situation was established, followed by a tracheostomy. Due to the massive mucosal swelling the presence of a foreign body or other cause could not be initially identified during the endoscopy. Postoperatively the patient was monitored in an intensive care unit before being transferred back to our ENT department with stable vital parameters and without neurological deficits. After one week the mucosal swelling decreased slowly and the computed tomography with radiocontrast (CT) scan of the head and neck displayed a hyperdense structure located in the epiglottis (Figure 1). Under general anesthesia a direct laryngoscopy was performed documenting a swollen epiglottis. Using blakesley forceps, a biopsy was performed resulting in emission of pus. We made an incision and drainage of the abscess and

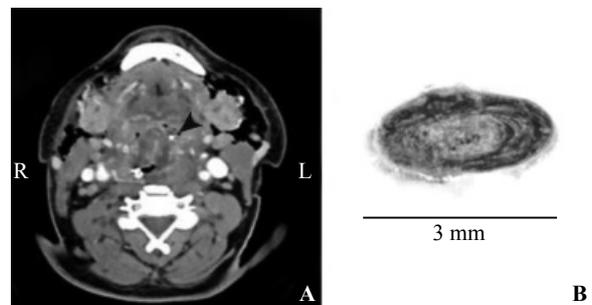


Figure 1. Organic foreign body located in the laryngeal mucosa. **A:** Axial computed tomography (CT) scan with radiocontrast of the head and neck displaying a hyperdense structure in the epiglottis (black arrow). **B:** Removed foreign body after fixation and paraffin embedding showing a calcified organic body.

retrieved an organic structure. The foreign body measured 1 mm × 3 mm and could be part of the patient's tooth (Figure 1). One week postoperatively the patient completely recovered with a significant decrease of the laryngeal swelling. The tracheostomy was closed successfully, and we discharged the patient in good condition. The histological examination of the foreign body revealed a calcified organic tissue e.g. part of the patient's tooth.

DISCUSSION

Various foreign bodies in the laryngeal mucosa can lead to a life threatening event. In adults, dental material can be found to cause massive swelling in the larynx.^[4] The level and the degree of obstruction as well as the size and shape of the foreign body determine the patients' symptoms and prognosis. Coughing, choking, gagging, hoarseness, inspiratory stridor, cyanosis and decreased oxygen saturation may be common early signs of a laryngeal swelling.^[5]

We report an unusual case of a massive sudden onset of laryngeal edema due to a small epiglottic foreign body presumably a dislocated part of the patient's tooth leading to a life threatening event with a dramatic loss of oxygen saturation. After stabilizing the patient's airway and starting a calculated antibiotic therapy the mucosal edema persisted. The computed tomography (CT) scan with radiocontrast of the head and neck displayed a hyperdense structure located in the epiglottis. Under general anesthesia the delayed arising epiglottic abscess was incised so the organic foreign body could be removed. In the histological preparation the structure was described as a calcified organic body. Thus we assume the removed foreign body could be a dislocated part of the patient's tooth.

CONCLUSION

This case highlights that even if no typical medical history of inhaling a foreign body is shown, parts of patients' teeth can lead to a life threatening laryngeal edema. Even small foreign bodies measuring just 1 mm × 3 mm can cause a massive laryngeal edema demanding skilled medical staff to rescue the patient's life.

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