



Multiple Dermoid Cysts in the Epiglottis Presenting with Dysphonia and Dysphagia: A Rare Case

Case Report

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Abstract ►

Dermoid cysts are developmental anomalies that occur during midline fusion in embryological life. It is known that they can also be acquired as a result of traumatic and iatrogenic implantation. Laryngeal involvement of dermoid cysts has been reported very rarely in the literature. This report presents a case with multiple dermoid cysts originating from the epiglottis. A 59-year-old male patient was admitted to our clinic with complaints of foreign body sensation in the throat and dysphagia. Multiple cystic lesions originating from the epiglottis were observed in the laryngeal examination of the patient. After radiological examinations, the cysts were completely excised by endolaryngeal surgery. After excision of the lesions, which were reported as dermoid cysts, all complaints of the patient regressed, and no recurrence was observed in the 6th month after the operation and his follow-up continued. Dermoid cysts originating from the epiglottis are very rare, but they should be kept in mind in the differential diagnosis of epiglottis lesions.

Keywords: Dermoid cyst, dysphagia, dysphonia, epiglottis, laryngeal cyst

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Introduction

Dermoid cysts are developmental anomalies arising from epithelial cell remnants during midline fusion of the first and second branchial arches in embryological life (1). Although they can be seen at any age, they are more common in young adults (2). Dermoid cysts are painless and slow growing benign lesions. Associated symptoms can vary according to the location of the cyst, its size, and the age of the patient. Only 6.9% of all dermoid cysts are located in the head and

neck region, and laryngeal involvement is extremely rare (3). The first dermoid cyst case arising from the epiglottis was reported by McKenzie (4) in 1930, and then few similar cases were presented in the literature (5-7). In all of these cases, single cystic lesions arising from the epiglottis were reported, but no cases with multiple dermoid cysts arising from the epiglottis have been reported in the literature so far.

In this report, we summarize the diagnosis, treatment, and follow-up of multiple

dermoid cysts originating from the epiglottis, which are rare cases.

Case Presentation

A 59-year-old male patient was admitted to our department with complaints of foreign body sensation in the throat and dysphagia that he had for a year. He had voice changes and difficulty in breathing for the last two months. There was no known history of trauma or infection. He had been smoking until two years ago. The consent form was obtained from the patient that his endoscopic laryngeal images and radiological images could be shared in the medical environment.

In the endoscopic laryngeal examination of the patient, two cream-colored, well-contoured masses were observed on the lingual surface of the epiglottis. In addition, there was mucosal thickening between the vallecula and the lingual surface of the epiglottis (Figure 1). The masses were pushing the epiglottis posteromedially. Other laryngeal structures were intact. In the evaluation with magnetic resonance imaging (MRI) and computerized tomography (CT), it was observed that the masses had peripheral contrast enhancement and cystic components (Figures 2a, b).

Complete excision of the laryngeal masses was planned. In the laryngeal suspension, smooth-surfaced, cream-colored cystic lesions were observed on the epiglottis in two different locations. The cysts were not related to each other. The larger of the cysts was approximately 25x20 mm in size and originated from the right lingual surface of the epiglottis, extended to the vallecula, the right pyriform sinus and the right aryepiglottic fold. The other cyst was approximately 15x10 mm in size and limited to the right upper part of the lingual surface of the epiglottis. The cystic lesions were excised completely using the cold dissection method. In addition, multiple cysts smaller than 1 cm and showing as mucosal thickening which were observed in the region during endoscopic examination were excised together with the excess mucosa.



Figure 1. Preoperative imaging of multiple cysts originating from epiglottis

Complications such as bleeding and dyspnea were not observed in the patient after the operation. Histopathological examination findings were consistent with dermoid cyst (Figures 3a, b). All complaints of the patient regressed in the postoperative period. Granulation tissues were seen in the surgical site in the postoperative first week, and no recurrence was observed in the 6th month follow-up examination (Figures 4a, b).

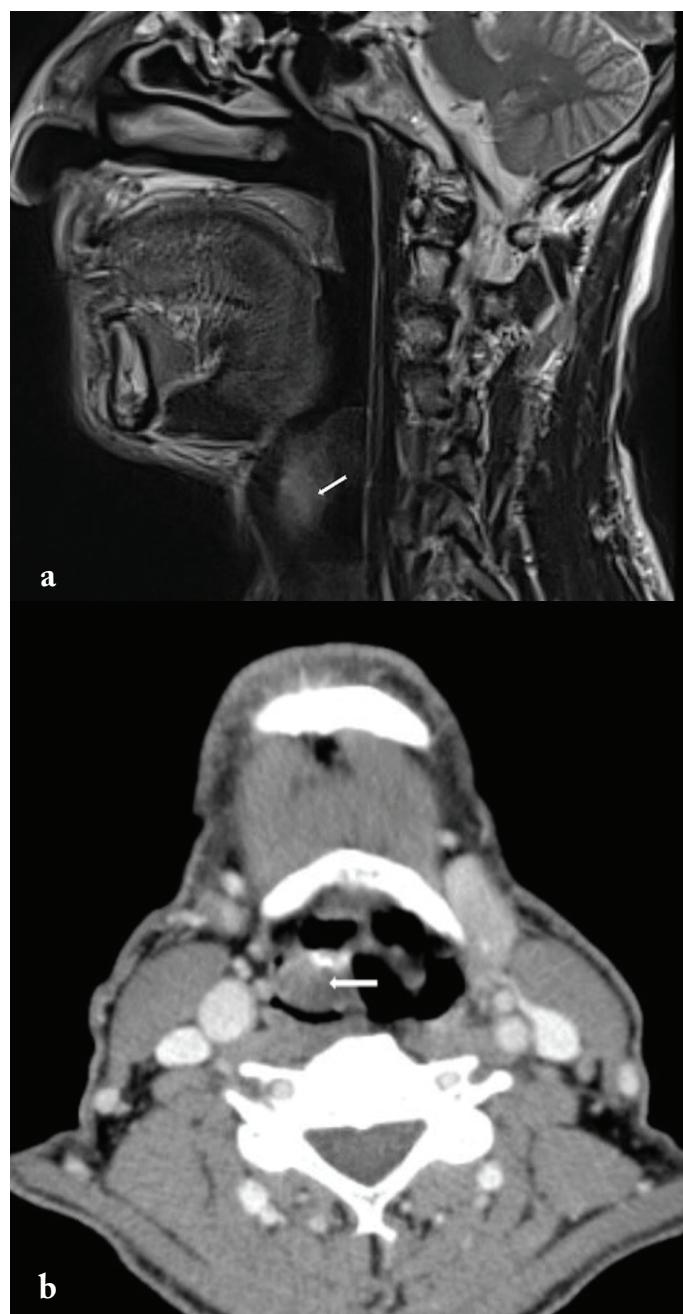


Figure 2. a) View of the cysts originating from the epiglottis in postcontrast sagittal T2-weighted MRI, b) View of the cysts originating from the epiglottis in axial section CT
CT: Computerized tomography, MRI: Magnetic resonance imaging

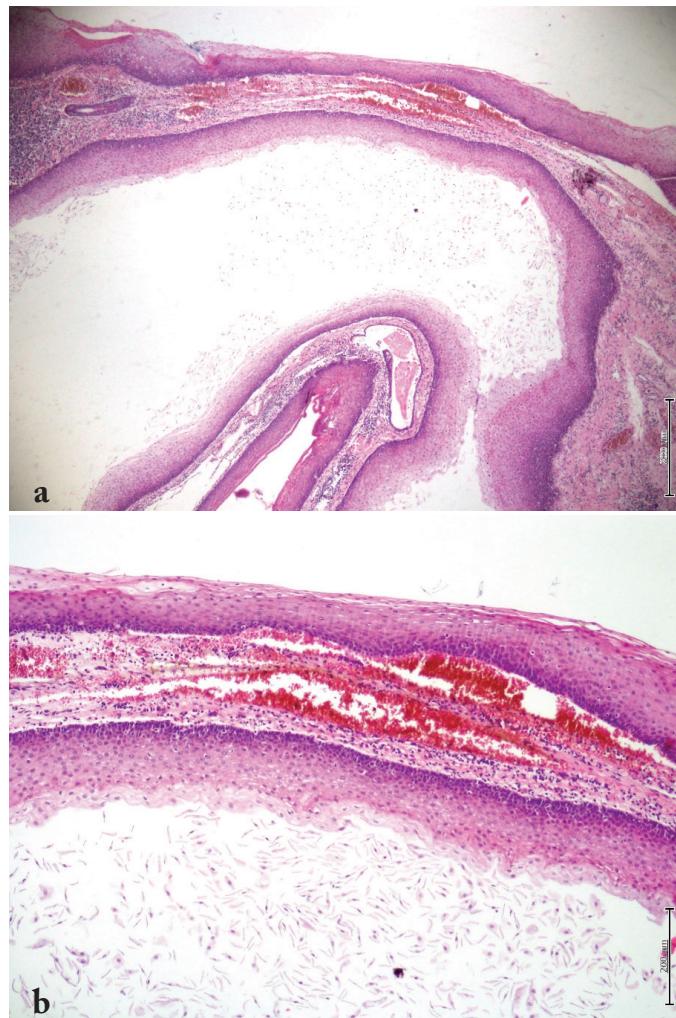


Figure 3. a) Histopathological imaging of the cystic structure in the subepithelial area (H&E, x40), b) Histopathological imaging of the cystic structure lined with stratified squamous epithelium similar to the glottis surface epithelium (H&E, x100)

Discussion

Dermoid cysts are benign lesions that occur during the midline fusion of the branchial arches in embryological life (1). It has also been reported in the literature that they can be acquired as a result of traumatic and iatrogenic implantation (2). Histopathologically, dermoid cysts are sub-grouped as real dermoid, epidermoid and teratoid (7).

Head and neck involvement of dermoid cysts are reported as 6.9% in the literature, and most commonly in the lateral eyebrows, oral cavity, the orbit, and the nasal cavity. Dermoid cysts originating from epiglottis are rarely observed (3).

Dermoid cysts are painless and slow growing benign lesions. Clinically, their symptoms are nonspecific and vary according to the location, the size of the cyst, and the age of the patient. While these cysts arising from the epiglottis may cause feeding and breathing difficulties in infants due to the

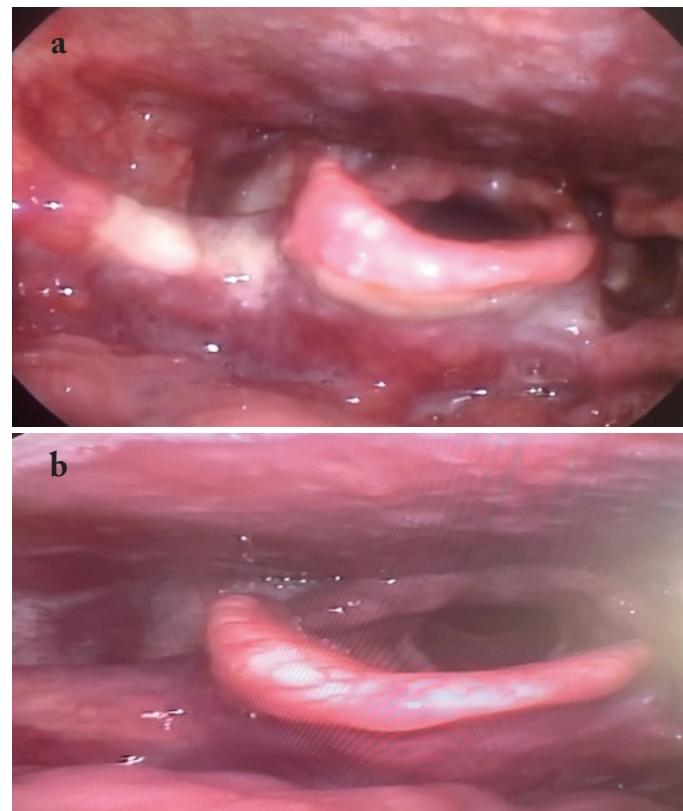


Figure 4. a) View of granulation tissues in the larynx in the 1st week after surgery, b) View of the larynx at 6-month follow-up after surgery

small airway, they are generally asymptomatic in adults and most of them are diagnosed incidentally. The foreign body sensation in the throat, difficulty in swallowing, and changes in voice are the most commonly observed complaints related to the laryngeal involvement of dermoid cyst in symptomatic adults (8). Our case presented with all of the most common complaints.

The differential diagnosis of dermoid cysts includes thyroglossal duct cysts, inclusion cysts, branchial cysts, submandibular and sublingual gland masses, lymphoepithelial cysts, lipomas, neurofibromas, hemangiomas and lymphangiomas (6, 7). CT and MRI have an important role in the diagnosis of dermoid cysts. After a detailed endoscopic laryngeal examination, the radiological methods that help the diagnosis provide information about the size and the extent of the cyst, and its relation to the surrounding tissues (9). A fine needle aspiration biopsy is often insufficient for diagnosis and gives non-diagnostic results (10). In our case, the lesions were evaluated using MRI and CT before the treatment was planned, and a biopsy was not performed due to the benign appearance of the lesions and the locations. In the histopathological evaluation performed after the excision of the lesions, a cystic structure lined with stratified keratinized epithelium was detected and the lesions were reported as dermoid cysts.

The only effective treatment for dermoid cysts is surgical excision (10). Although different methods such as conventional, laser or plasma blade are used depending on the location of the lesion and the available technical equipment, the aim is to completely remove the cyst, including the cyst walls (7). It is reported in the literature that the recurrence rates are very low in cases where the cyst is completely excised (9). In this case, complete removal of the cysts was performed with conventional methods and no recurrence was encountered in the follow-up period.

Conclusion

This is the first case in which multiple dermoid cysts arising from the epiglottis are reported in the literature. Although dermoid cysts originating from the epiglottis are very rare, they should be kept in mind in the differential diagnosis of epiglottis lesions. Surgery is the gold standard in treatment, and recurrences are prevented by complete surgical excision of the cysts.

Informed Consent: The consent form was obtained from the patient that his endoscopic laryngeal images and radiological images could be shared in the medical environment.

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Authorship Contributions

Surgical and Medical Practices: E.S.A., O.Ç., S.C., Concept: E.S.A., O.Ç., S.C., Design: E.S.A., O.Ç., S.C., Data Collection and/or Processing: E.S.A., O.Ç., S.C., Analysis and/or Interpretation: E.S.A., O.Ç., S.C., Literature Search: E.S.A., O.Ç., S.C., Writing: E.S.A., O.Ç., S.C.

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Main Points

- Dermoid cysts are benign lesions that occur during the midline fusion of the branchial arches in embryological life.
- 6.9% of all dermoid cysts are seen in the head and neck region and laryngeal involvement is very rare.
- Computerized tomography and magnetic resonance imaging have an important role in diagnosis. They give information about the structure of the lesion, its relationship with the surrounding tissues and its extension.
- The only effective treatment is surgical excision. Recurrences can be prevented by removing the cyst completely.

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