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Unusual laryngeal cyst

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Abstract
We report a lateral saccular cyst of the larynx with both an internal and external component. The patient had a four year history of a cervical swelling and hoarseness. He presented acutely with stridor. The cyst was resected successfully without tracheostomy.

Case report

A 63-year-old West Indian carpenter was referred with a two week history of increasing difficulty in breathing. He had a four year history of hoarseness and a swelling in the front of his neck. The swelling had increased in size over the previous two weeks, his hoarseness had worsened and his breathing had become laboured except at rest. On examination, he had stridor and a 5 cm fluctuant swelling just to the left of the midline at the level of the thyroid cartilage. It was slightly tender, fixed to deep structures and moved briskly on swallowing. At indirect laryngoscopy, a smooth submucosal swelling was seen in the left supraglottis obscuring the left vocal cord, pushing the epiglottis to the right and extending up into the vallecula. A plain X-ray showed a diffuse soft tissue swelling without any air-fluid level.

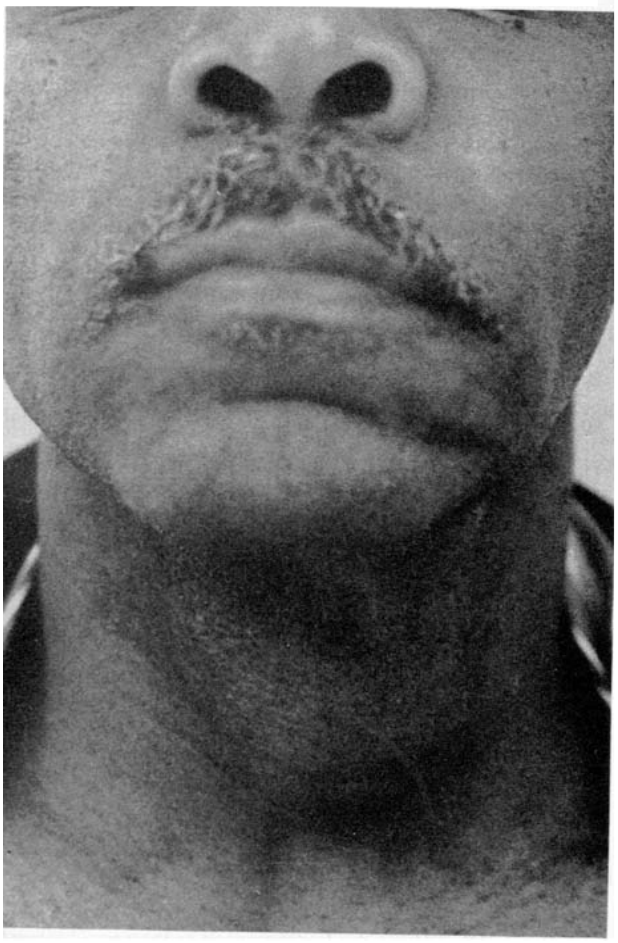


Fig. 1
Anterior view of the external component of laryngeal cyst

Aspiration of 50 ml of thick yellow proteinaceous fluid relieved his airway obstruction and this was sent for culture and Ziehl-Neelson staining; both were negative. On re-examination, both the internal and external components were noted to have reduced in size. Within twenty-four hours the cyst had partially refilled (Fig. 1) and the patient underwent a CT scan (Fig. 2). This confirmed the clinical findings and showed the internal component to extend from above the true vocal cords to the level of the hyoid bone. Direct laryngoscopy was undertaken to exclude any other laryngeal pathology causing obstruction to the saccule.

The patient was advised pre-operatively that a tracheostomy might be necessary. At operation the external component of the cyst was mobilized from the thyroid cartilage and a wide channel communicating with the internal component was identified through the thyrohyoid membrane. The perichondrium was elevated from the left thyroid lamina and the upper left quandrant of the cartilage excised. The internal component was submucosal without any communication with the laryngeal lumen and the entire cyst was excised. The external branch of the superior laryngeal nerve was preserved and the perichondrium was sewn back in position. Extubation was uneventful and no tracheostomy was required. The patient made a good recovery and was asymptomatic at review. Histology showed the cyst to be lined by keratinising squamous epithelium.

Discussion

De Santo *et al.* in 1970 proposed a classification of laryngeal cysts based on site, size, contents and relationship to the laryngeal mucosa. This has met with widespread acceptance Holinger *et al.*, 1978; Batsakis, 1979). Recently a modified working classification of laryngeal cysts has been proposed by Ramesar *et al.* (1988), based on histology. They point out that oncocytic cysts tend to occur in an older age group around the ventricle and that tonsillar cysts are sometimes multiple and often occur in the vallecula. However, because this classification is based on histology it is largely retrospective and it diverts attention from the site, which is the primary factor in management.

Saccular cysts are mucus-filled and originate in the plane of the saccule and differ from laryngoceles in that they contain no air. They are subdivided into anterior cysts that protrude from the ventricle over the glottis, and lateral cysts which extend

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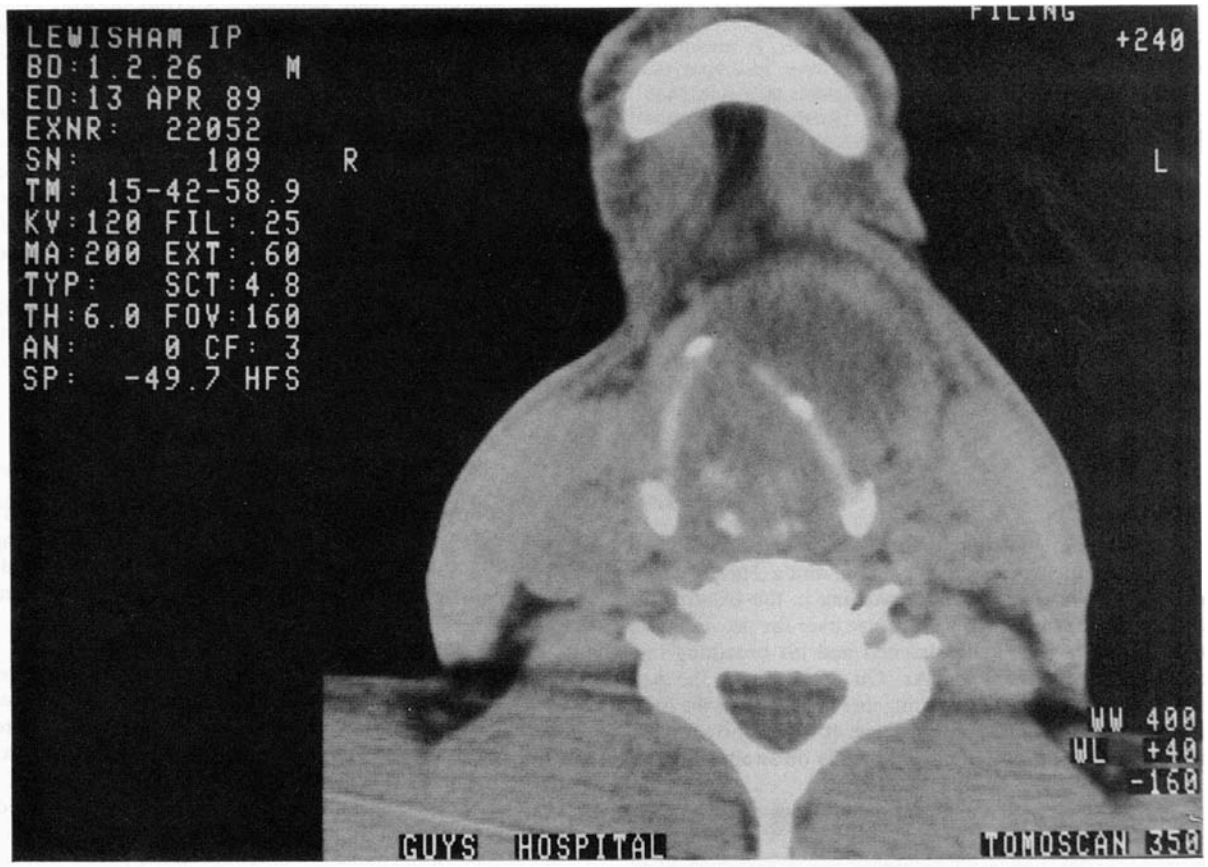


FIG. 2

CT scan Showing the internatal and external components of the saccular cyst.

into the supraglottis deforming the false cord, the aryepiglottic fold or vallecula.

Saccular cysts with both an internal and external component are very rare; nine have been reported in the literature (Black, 1951; El-Hakeem, 1951; Laff, 1953; El Mofty, 1959; De Santo *et al.* 1970). These patients presented with a long history of hoarseness and cervical swelling; however, none had stridor. Aspiration helps to confirm the diagnosis, and in our patient also relieved airway obstruction. The majority of lateral saccular cysts reported were removed by laryngofissure with tracheostomy; however, De Santo *et al.*, (1970) and Holinger *et al.* (1978) advocate the approach we used through the thyrohyoid membrane without splitting the thyroid cartilage.

The association of carcinoma of the larynx and laryngocpele is well documented, and is attributed to obstruction of the neck of the saccule. De Santo *et al.* (1970) report malignancy associated with two anterior cysts. In patients with either saccular cysts or laryngocoeles a underlying neoplasm should be excluded by direct laryngoscopy.

Saccular cysts may be congenital, due to atresia of the saccular orifice, and this is the current explanation of cysts occurring in childhood (Michaels, 1984). Cysts in adults are said to be acquired by obstruction of the saccular orifice by trauma, neoplasia or inflammation. However, it is possible that a dormant saccular inclusion might be responsible for cysts presenting at any age. Most laryngeal cysts are lined by columnar epithelium (Michaels, 1984) or less commonly by stratified squamous epithelium, or a combination of the two. The histological appearance of laryngeal cysts is of little help in their classification and management unlike the structural approach of De Santo *et al.* (1970).

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