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Case Report

A rare case of epidermoid cyst of tongue

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Introduction

Dermoid and epidermoid cysts are uncommon developmental cystic malformations termed as dysontogenetic cyst. Most clinicians and researchers believe that lingual dermoid and epidermoid cysts are a result of entrapped ectodermal tissue of the first and second branchial arches, which fuse during the third and fourth weeks in utero. A second theory suggests that these cysts may be a variant of the thyroglossal duct cyst with ectodermal elements predominating.[1]

Dermoid and epidermoid cysts occur in the head and neck region with an incidence of 6.9–7%.[2,3] About 11.5% of dermoid cysts of the head and neck appear in the floor of the mouth, the second most common location after the floor of the mouth being the cervical region and rarely in the tongue. They represent less than 0.01% of all oral cavity cysts.[4] Usually lingual dermoid cysts are discovered at birth or at the first year of life. However, when they are developed on the ventral surface of the tongue, their clinical appearance will be much later in childhood or at early adult life. Anatomic classification divides the epidermoid cysts of the floor of the mouth into three groups according to their relation to the muscles of the floor of the mouth: sublingual or median genioglossal cysts, located above the geniohyoid muscles; median geniohyoid cysts, located in the submental region between the geniohyoid and the mylohyoid muscles; and lateral cysts, located in the submaxillary region.[5]

We present the clinical, histological findings and management of epidermoid cyst on ventral surface of the tongue in a 12-year-old boy.

Case report

A 12-year-old male child patient reported to the dental centre with complains of nodular mass on ventral surface of tongue since 1 year and 6 months (Fig. 1). Patient also complained of difficulty in breathing, eating and swallowing. The nodule was painless and had progressively grown to its present size. Intra oral examination of the child revealed an ovoid solitary mass measuring about 5 cm × 4 cm on the ventral surface of the anterior two thirds of the tongue (Fig. 1). Edges of the mass could not be distinctly made out. Mucosa over the swelling was intact & normal but appeared stretched. The swelling was soft to cystic in consistency. There was no evidence of cervical lymphadenopathy. Transillumination was negative. Aspiration of the cystic mass yielded a viscous pale yellow fluid. Hence a provisional diagnosis of dermoid or epidermoid cyst was made. Routine haematological tests were carried out and found to be within normal limits. Computed tomography

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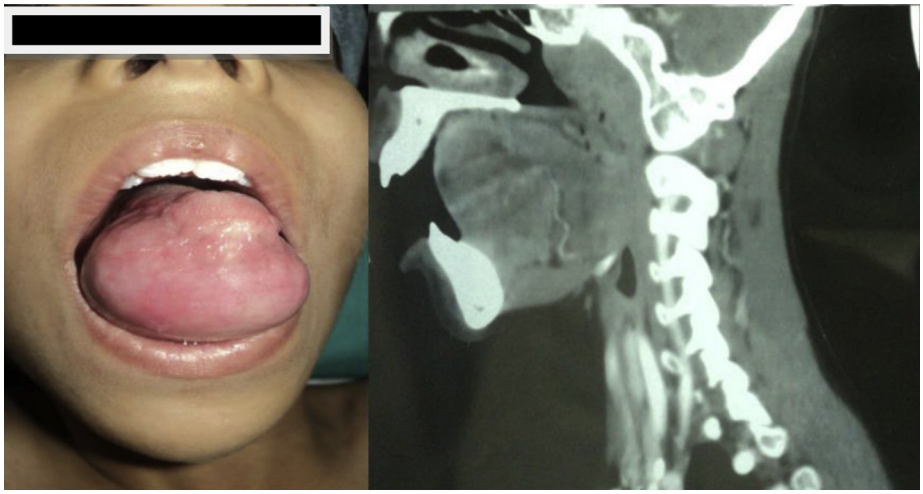

Fig. 1 – Pre-op view of the lesion and CT sagittal view.

showed a well-circumscribed lesion involving the ventral aspect of the tongue with homogenous hypo-dense areas suggestive of a cystic lesion (Fig. 1). Surgical enucleation of the mass was done under general anaesthesia with nasotracheal intubation. A midline vertical incision was placed on the ventral surface of the tongue and the mass which appeared to be a thick walled tense cyst was gently separated from the tongue musculature and was excised completely (Fig. 2). Histopathological examination revealed the presence of pseudostratified ciliated squamous epithelium, with mononuclear inflammatory infiltrate and lymphoid follicles in the cyst wall, without any skin adnexa (Fig. 3). Thus the final diagnosis of epidermoid cyst was made. Post-operative period was uneventful and no recurrence was noted at 1-year follow-up period (Fig. 4).

Discussion

Epidermoid cysts occur primarily on facial skin or neck, and are most common in the midcheek and preauricular area. Intraoral epidermoid cysts are considered rare and most commonly occur in the floor of the mouth. New and Erich (1937) reported 24 (1.6%) epidermoid cysts occuring in the floor of the mouth out of 1495 cases of dermoid cysts seen at the Mayo Clinic.[6]

Clinically epidermoid cyst may be asymptomatic, often discovered by a painless swelling growing slowly and surrounding by a normal mucosa. The cyst can enlarge to a point that the patient present difficulty of articulation, mastication and deglutition and airway compromise. The differential diagnosis of a painless swelling in the midline of the tongue include cystic hygroma, lymphatic cyst, neurofibroma, haemangioma, lingual thyroid, enteric duplication cyst and dermoid cyst.[7,8]

Most cases are suspected from the history of acne and of past cysts with infections, but less apparent epidermoid cysts will present in a manner similar to a lymph node enlargement. In various locations, they may be confused with entities more specific to that location. In the preauricular area, an epidermoid cyst may resemble a parotid tumour, in the midlateral neck, a branchial cyst, in the midline of the neck, a thyroglossal tract cyst, and in the submental triangle, a dermoid cyst.[3]

The imaging modalities include ultrasonography, computed tomography and magnetic resonance, which help in diagnosis. Ultrasonography is the most used technique because it is a low-cost, fast, reliable imaging method, without

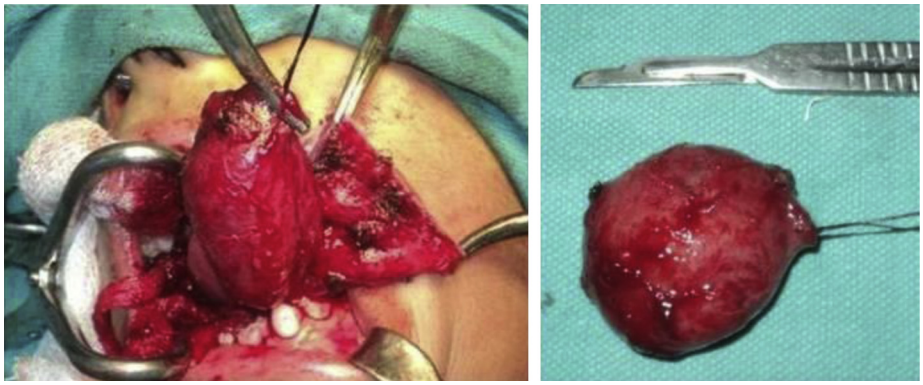

Fig. 2 – Exposure & delineation of the lesion.