

Congenital Teratoid Cyst of the Tongue

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Abstract

Background: Teratoid cyst is a rare variant of dermoid cyst composed of tissues from the two or more germinal layers. They are seen in children and young adults, arising as a result of failure of closure of the embryonic branchial arches or migration of the germinal cells away from place of origin. **Case Report:** We describe a male infant with a teratoid cyst of the tongue. **Conclusion:** Treatment of choice in mature teratoid cyst is surgical excision.

Keywords: Branchial region, Dermoid cyst, Tongue, Tongue Diseases.

Introduction

Teratoid, dermoid and epidermoid cysts are uncommon developmental cyst, often called dysontogenic cyst. There are two theories suggesting the origination of these cysts, they can occur as a result of (i) entrapped ectodermal tissue of first and second branchial arches which fuse during the third and fourth week in utero, (ii) or as a variant of thyroglossal cyst [1]. Dermoid cysts are benign pathologies that occur anywhere in the body but more often in area of embryogenic fusion [1]. They are commonly seen in floor of mouth and the cervical region, but rarely seen in the tongue [2].

Teratoid cyst is the least common of the three variants of dermoid cysts and represents less than 0.01% of all oral cyst [3,4]. We present the clinical, histological findings and management of teratoid cyst in an infant.

Case Report

A 3 month old male child reported to the Dental/Maxillofacial clinic of Federal Teaching Hospital

Gombe, with complaints from the mother, about a nodular mass below the tongue since birth. The swelling had been growing progressively in size raising the tongue and often disallowing the child from sucking. The intra-oral examination of the child's mouth revealed an ovoid mass on the ventral surface of the anterior two third of the tongue [Fig.1], tilting to the left ventral surface than the right ventral surface. Mucosa overlying the surface was intact with a hypereamic region on the right ventral surface; the swelling was basically firm but fluctuant in some area. Aspiration of the cystic mass yielded a viscous chocolate colored fluid, hence a provisional diagnosis of epidermoid cyst was made. Routine hematological investigation was carried out and hematocrit found to be 48%, consequent upon which the patient was prepared for surgical excision under general anaesthesia.

A 2.0 vicryl stitch was passed through the tip of the tongue through and through to retract the tongue, and a midline ventral incision made, using a dissecting scissors the cystic mass was dissected from the tongue musculature [Fig.2]. The intra-operative blood loss was minimal and



Fig.1: Cystic lesion on the tongue of the patient.

the wound closed with 3.0 vicryl suture using the continuous suture technique. Post-operative period was uneventful except for the slight tongue edema that resolved within a week of warm saline mouth bath with cotton wool. Intravenous antibiotics administered included ceftriazone 250 mg twice daily, metronidazole 100 mg thrice daily, for five days and paracetamol 100 mg thrice daily for three days. Patient was discharged home after one week convalescent period.

Histopathologic examination revealed a cystic greyish white tissue, measuring 2.3×1.7×1.3 cm, cut surface shows cystic cavity containing a greyish pasty material with a smooth cystic lining. Sections show a cyst lined by respiratory, intestinal and gastric type epithelial tissue with focal areas of stratified squamous epithelium, ulceration and granulation tissue. The overall features are in keeping with a benign cystic lesion and final diagnosis of mature teratoid cyst was made [Fig.4].

Discussion

Developmental cysts are the commonest cause of cystic masses affecting the head and neck region in children. Of these, thyroglossal cysts are the most common, accounting for 70% of the cases, followed by branchial cleft cyst. Most other cystic lesions are rarely encountered [5]. Epidermoid and



Fig.2: Dirty brown aspirate from the lesion.

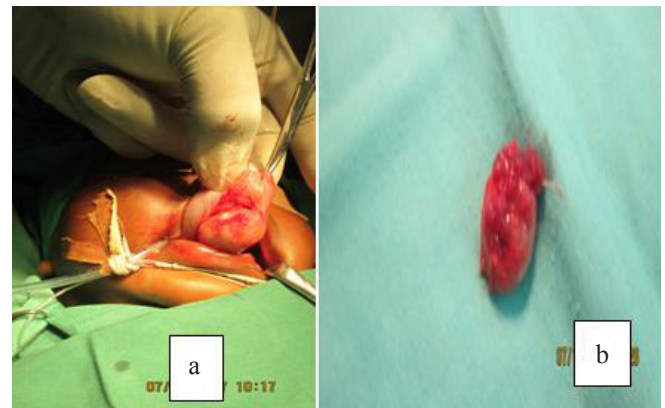


Fig.3: Lesion just before (a) and after surgical excision (b).

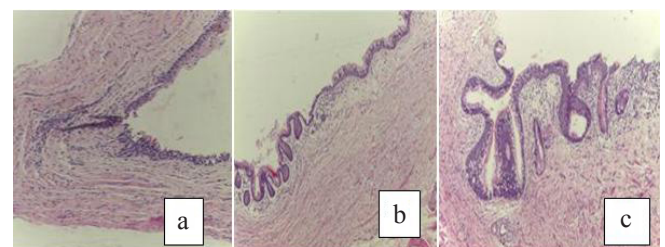


Fig.4: Lesion showing respiratory (a), transition between respiratory and gastric (b) and gastric (c) epithelia (H&E x 10).

dermoid cysts occur throughout the body, with 7% occurring in the head and neck region and 1.6% within the oral cavity [4].

Majority of the case occur between the ages 15 and 35 years with a slight male predilection. For oral lesions, the floor of the mouth in the midline is the most common location. Lesions have also been

reported in the buccal mucosa, tongue, lips, intra-ossously in the mandible and maxilla [5]. The present case occurred in the tongue of an infant rarely seen in this age group [6]. It usually presents as a slow growing lesion but can grow to become substantially big causing respiratory distress if left untreated as reported by Akinbami *et al.* [7]. The differential diagnosis for dermoid cyst should include ranula (caused as a result of blockage of Wharton's duct), branchial cleft cyst, cellulitis of the floor of the mouth, heterotropic gastrointestinal cyst [8].

Treatment adopted in this case is surgical excision, this is the usual mode of treatment because recurrence of this lesion is very rare [6,7]. However, there had been reports of a number of complications such as infections, obliteration of the sinus ducts and malignant transformation especially of the teratoid variety [2,9,10].

Conclusion

Teratoid cyst of the oral cavity is an unknown pathology, presenting as a slow growing tumor. Investigation in poor resource setting is limited to aspiration, incisional and excisional biopsy. If aspirate is clear-colored and slimy, the inkling is towards ranula, but in this rare case of a brownish aspirate a provisional diagnosis of a cyst was made. Treatment was by surgical excision.

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