

Case Report

Intraoral dermoid cyst: report of two cases

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ABSTRACT

Dermoid cysts are benign cystic abnormalities lined by squamous epithelium. They account for 1.6% to 6.9% of all cysts in the head and neck region. They constitute less than 0.01% of all oral cavity cysts. Here we present two case reports of dermoid cyst in the floor of mouth. In both the cases patients presented with floor of mouth asymptomatic swelling since many years. Intraoral surgical excision of the lesion was carried out under general anesthesia. . Transverse incision was taken in the floor of the mouth, extending between both the premolars on either side, over the most prominent part of the swelling. Wharton's duct was identified before incising. Once capsule was reached, blunt dissection was done to free the capsule. Histopathology in both the cases was suggestive of a dermoid cyst. An intraoral approach is preferred in cases of cysts above the mylohyoid muscle. Intraoral approach gives a better cosmetic and functional result. Dermoid cyst, though rare should be kept in mind as a differential in floor of mouth lesions.

Keywords: Dermoid cysts, Intraoral, Extra oral, Mylohyoid, Surgical excision

INTRODUCTION

Dermoid cysts are benign cystic abnormalities lined by squamous epithelium. They account for 1.6% to 6.9% of all cysts in the head and neck region.¹ They constitute less than 0.01% of all oral cavity cysts.² Dermoid cysts occur predominantly in sites where embryonic parts fuse together.³ They mostly occur in second or third decade of life. Because they are almost always asymptomatic, dermoid cysts are usually diagnosed only after they have reached a considerable size. Treatment is surgical excision via intraoral or extra oral route; based on the lesion's size and location.⁴ Here we present two case reports of dermoid cyst in the floor of mouth.

CASE REPORT

Clinical case 1

A 16 year old young girl came to the department of ENT in order to seek advice regarding swelling below the

tongue, which was initially small and increased in size over a time period of 3 years. On intraoral examination, it

was a 3 X 3 cm solitary midline cystic lesion extending into the neck. (Figure 1, 2) On bimanual palpation, it was soft, fluctuant, non-tender and there was no associated erythema or lymphadenopathy. Ultrasonography was suggestive of a cystic area with echogenic material and internal echoes within it. MRI revealed an encapsulated cystic mass without any calcification. The differential diagnosis on basis of clinical and radiological similarity consisted of lipoma, ranula, thyroglossal duct cyst, cystic hygroma, branchial cleft cysts, and benign and malignant tumors of the floor of the mouth and adjacent salivary glands. Intraoral surgical excision of the lesion was carried out under general anesthesia. . Transverse incision was taken in the floor of the mouth, extending between both the premolars on either side, over the most prominent part of the swelling. Wharton's duct was identified before incising. Once capsule was reached, blunt dissection was done to free the capsule (Figure 3). Mylohyoid muscle fibres were separated in the midline

and the entire lesion was removed. Muscle fibres were stitched in midline and incision was closed taking care of the submandibular gland ducts. Macroscopically, the lesion was encapsulated and contained a keratin-like yellow material and resembled a dermoid cyst. Histopathology was suggestive of a dermoid cyst. Post-operative period was uneventful.



Figure 1: Intra oral swelling.



Figure 2: Intraoral swelling plunging in neck.

Clinical case 2

An eleven year old female presented to us with a swelling in the floor of mouth since 2 months. She only complained of difficulty in chewing food and there was no associated history of dysphagia, dyspnoea or pain associated with the swelling. On examination, a smooth, rounded well defined swelling was seen in the floor of mouth, measuring 4 cm X 4 cm in its greatest dimension (Figure 4). CT base skull to mediastinum revealed a well encapsulated cystic swelling between tongue and floor of mouth and was suggestive of ranula (Figure 5). Surgical excision was performed through an intraoral midline

incision under general anaesthesia. The mass was dissected all around and complete removal was done. (Figure 6) Grossly, the lesion appeared to be encapsulated and consisted of a keratin-like yellow material (Figure 7). Histopathology revealed that it is a dermoid cyst lined by stratified squamous epithelium with the lumen containing keratin. Post-operative course was uneventful, and there was no evidence of recurrence at a period of 4 months after surgery.

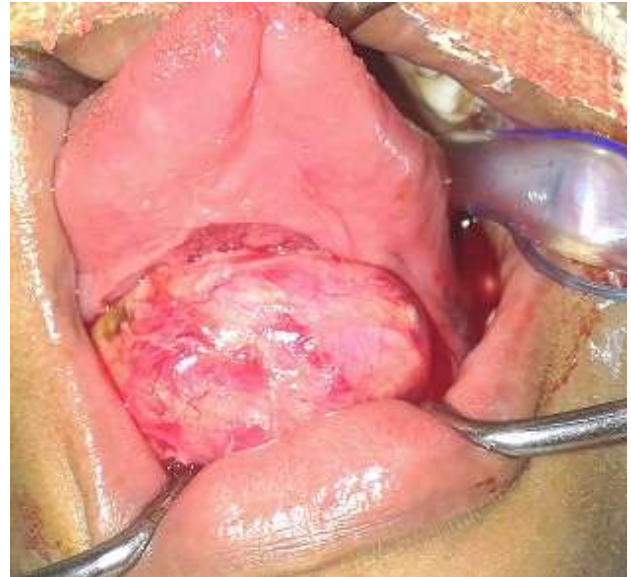


Figure 3: Excision using transverse incision in floor of mouth.



Figure 4: Second case with intraoral mass.

DISCUSSION

Dermoid cysts are developmental lesions that form as a result of entrapment of pluripotent cells or due to implantation of epithelium, with the former being termed congenital and the latter as acquired.⁵ The pathogenesis of midline cysts of the floor of the mouth is not well established, and dysontogenetic and thyroglossal anomaly theories have been described.⁶

Histologically, they have been classified by Meyer into three categories as epidermoid, dermoid or teratoid.⁵



Figure 5: Axial CT depicting a hypodense, non-enhancing mass in the floor of mouth overlying mylohyoid.



Figure 6: The horizontal incision made on the floor of the mouth.

The dermoid cysts of floor of mouth were referred to as sublingual dermoid cysts by Jourdain. Roser described that many cases of ranula and sebaceous cysts on the base of the tongue were dermoid cysts. Also Chairi studied

that floor of the mouth tumours originated from the entrapment of epidermoid cells at the embryonic age.⁷



Figure 7: Dermoid cyst after surgical removal.

Longo and others⁹ found that men are affected more often than women in the ratio 3:1, with mean age 28 years. Usually present as slow-growing asymptomatic mass located in the midline, above or below the mylohyoid muscle. When located above the muscle, the cyst present as a sublingual swelling; when below the muscle, they appear as a submental swelling.⁸ Hence, presenting complaints include tongue elevation, speech alteration or double-chin development.²

The investigations had done include USG, the computed tomography (CT) and the magnetic resonance imaging (MRI). Both MRI and CT allow precise localization of the lesion. MRI is preferred over CT as it provides with better soft-tissue resolution and, thus, helps to depict the internal structure of a mass lesion. The differential diagnoses are Ranula, unilateral or bilateral blockage of Wharton's ducts, thyroglossal duct cyst, cystic hygroma, branchial cleft cysts, acute infection or cellulitis of the floor of the mouth, infections of sublingual glands, benign and malignant tumors of the floor of the mouth and adjacent salivary glands. The treatment of choice is surgical removal either via an intraoral or extra oral approach. Well-formed capsule helps in easy removal. An intraoral approach is preferred in cases of cysts above the mylohyoid muscle and the extra oral technique in case of large dermoid cysts affecting the submandibular and submental spaces and in presence of infection that could compromise the patient's airway. Intraoral approach gives a better cosmetic and functional result.

Informed consent was obtained from the patient included in this study

CONCLUSION

Dermoid cyst, though rare should be kept in mind as a differential in floor of mouth lesions. The definitive

treatment is surgical excision via intraoral approach. This offers a good prognosis and very low chances of recurrence.

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REFERENCES

1. Bonet-Coloma C, Mínguez-Martínez I, Palma-Carrió C, Ortega-Sánchez B, Peñarocha-Diago M, Mínguez-Sanz JM. Orofacial dermoid cysts in pediatric patients: A review of 8 cases. *Med Oral Patol Oral Cir Bucal*. 2011;16:e200-3.
2. Bitar MA, Kumar S. Plunging congenital epidermoidcyst of the oral cavity. *Eur Arch Otorhinolaryngol*. 2003;260(4):223-25.
3. De Ponte FS, Brunelli A, Marchetti E, Bottini DJ. Sublingual epidermoid cyst. *J Craniofac Surg*. 2002;13(2):308-10.
4. Lima SM Jr, Chrcanovic BR, De Paula AM, Freire-Maia B, de Souza LN. Dermoid cyst of the floor of the mouth. *Scientific World Journal*. 2003;3:156-62.
5. Longo F, Maremonti P, Mangone GM, De Maria G, Califano L. Midline (dermoid) cysts of the floor of the mouth: Report of 16 cases and review of surgical techniques. *Plast Reconstr Surg*. 2003;112:1560-5.
6. MacNeil SD, Moxham JP. Review of floor of mouth dysontogenic cysts. *Ann Otol Rhinol Laryngol*. 2010;119(3):165-73.
7. Gold BD, Sheinkopf DE, Levy B. Dermoid, epidermoid and teratomatous cysts of the tongue and the floor of the mouth. *Journal of Oral Surgery*. 1974;32(2):107-11.
8. Louis PJ, Hudson C, Reddi S. Lesion of floor of the mouth. *J Oral Maxillofac Surg*. 2002;60(7):804-7.
9. King RC, Smith BR, Burk JL. Dermoid cyst in the floor of the mouth. Review of the literature and case reports. *Oral Surg Oral Med Oral Pathol*. 1994;78:567-76.

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