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Case Report

Dermoid cyst of the floor of the mouth in a young adult female: a case report

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ABSTRACT

Dermoid cysts occur in the midline of the floor of the mouth, and they do not appear until they grow large enough or get infected. Rarely, they can be found in other areas beneath the oral mucosa such as jaw bone. This study aims to report a case of 20 years old female has large dermoid cyst in floor of mouth and increase the awareness of such lesion. A 20-year-old female presented to the oral and maxillofacial surgery clinic with a complaint of swelling in the floor of the mouth that had been increasing in size for approximately a year and a half. The patient was medically free and exhibited a notable 'double chin' appearance. Clinical examination revealed a nodular lesion in the floor of the mouth. Radiographic evaluation demonstrated a well-defined radiolucent lesion approximately 6 × 3 cm in diameter, perforating the mylohyoid muscle. The differential diagnosis included dermoid cyst, lymphoepithelial cyst, and branchial cleft cyst. Excisional biopsy was done and Histopathological examination showed a cyst lined by keratinized stratified squamous epithelium containing sebaceous glands, confirming the diagnosis of a dermoid cyst. Dermoid cysts should be considered in the differential diagnosis of cystic lesions of the floor of the mouth. Accurate diagnosis relies on comprehensive clinical assessment, appropriate radiographic investigations, and definitive histopathological confirmation following complete surgical excision. Surgical management is associated with an excellent prognosis and a low risk of postoperative complications.

Keywords: Cystic lesion, Dermoid cyst, Oral cavity

INTRODUCTION

Dermoid cysts DCs are benign lesions arising from totipotent stem cells that undergo ectodermal differentiation.[1]

In the oral region, most DCs occur in the midline of the floor of the mouth, and they do not appear until they grow large enough or get infected. Rarely, they can be found in other areas beneath the oral mucosa such as jaw bone.[2,3]

This study aims to report a case of 20 years old female has large dermoid cyst in floor of mouth and increase the awareness of such lesion.

CASE REPORT

A 20-year-old female presented to the oral and maxillofacial surgery clinic with a complaint of swelling in the floor of the mouth that had been increasing in size for approximately a year and a half. The patient was

medically free. Clinical examination revealed a nodular lesion in the floor of the mouth. Radiographic evaluation demonstrated a well-defined radiolucent lesion approximately 6×3 cm in diameter, perforating the mylohyoid muscle as shown in Figure 1. The differential diagnosis included dermoid cyst, lymphoepithelial cyst, and branchial cleft cyst. Excisional biopsy was done and shows the cystic lesion after complete excision as shown in Figure 2. Histopathological examination showed a cyst lined by keratinized stratified squamous epithelium containing sebaceous glands, confirming the diagnosis of a dermoid cyst as shown in Figure 3.

This case has been approved by IRB in ministry of health Tabuk protocol no. TU-077/025/334.

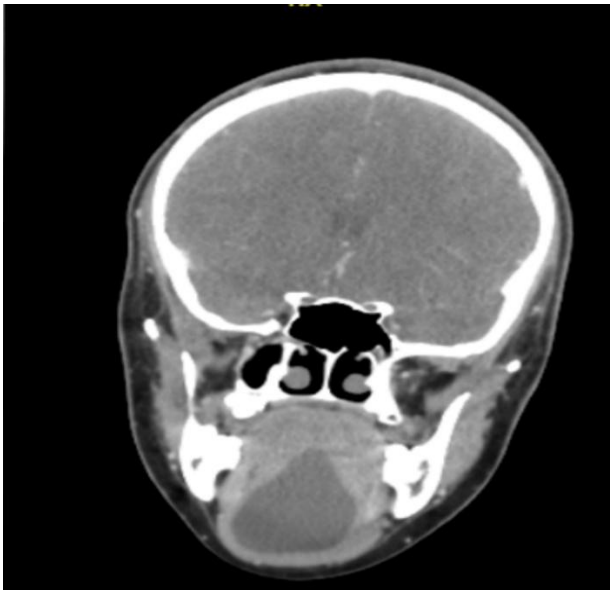

Figure 1: CT X-ray coronal section shows well defined radiolucent lesion located in floor of mouth, perforation the mylohyoid muscle and extended to the chine area.

Figure 2: Lesion after excision and shows the maximum diameter around 6 cm.

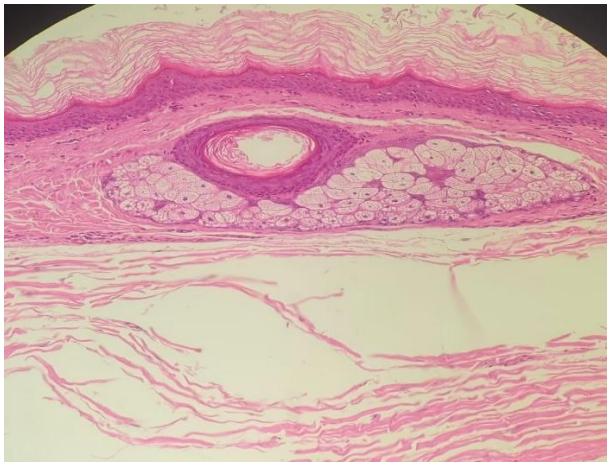

Figure 3: Cystic wall lining by keratinized stratified squamous epithelium with island of sebaceous gland.

DISCUSSION

Intraoral dermoid presents most commonly in the submental region, the floor of the mouth, and the region of fusion of the first and second branchial arches in the midline. They grow slowly, but may enlarge and interfere with deglutition and speech or can pose a critical risk to the airway like the case presented in this article, therefore require immediate surgical intervention.[4] Also carcinomatous change, although extremely rare, should be considered in long standing cases.[5]

Dermoids are thought to arise congenitally from entrapment of ectodermal tissue during midline closure of the first and second branchial arches.[6,7]

Anatomically, it is possible to distinguish 3 different types of dermoid cysts: median genioglossal, median geniohyoid, and lateral cysts, according to the anatomic relationship between the cyst and the muscles of the floor of the mouth. So, with regard to the midline, these cysts are differentially diagnosed as central and lateral cysts.[8]

They are commonly seen in the age group between 15 and 35 years.[9]

Similar presentations to our case have been reported, particularly among adolescent and young adult patients. Martins et al described a 15-year-old male with a 7 cm dermoid cyst located in the right sublingual space, highlighting the potential for significant lesion size even in young patients.[10] Lima et al. reported a smaller lesion (30×20×18 mm) in a 12-year-old patient involving the submental region of the floor of the mouth.[11] Hibelot and De Speville documented a 15-year-old female with a dermoid cyst measuring 7×4×3 cm in the floor of the mouth in sublingual space , a size comparable to the lesion observed in the present case.[12] Patel et al reported a dermoid cyst measuring 3.5×1.7×1.0 cm in a 17-year-old female, localized to the left sublingual space.[13] Makos et al presented two cases involving lesions measuring 6.5 cm

in the submental region and 5.4 cm in the floor of the mouth, further emphasizing the variability in lesion size and location.[14]

Larger lesions have also been described, such as the case reported by Alyamani involving a 22-year-old male with a massive sublingual cyst measuring 12×12 cm, which caused marked elevation of the floor of the mouth.[15] Compared with these reports, the lesion size in the present case falls within the commonly documented range.

Prognosis of dermoid cyst after surgical treatment is excellent, and the postoperative complications are low.[16]

CONCLUSION

Dermoid cysts should be considered in the differential diagnosis of cystic lesions of the floor of the mouth. Accurate diagnosis relies on comprehensive clinical assessment, appropriate radiographic investigations, and definitive histopathological confirmation following complete surgical excision. Surgical management is associated with an excellent prognosis and a low risk of postoperative complications.

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REFERENCES

1. Hills SE, Maddalozzo J. Congenital lesions of epithelial origin. Otolaryngol Clin North Am. 2015;48(1):209-23.
2. Komiyama K, Miki Y, Oda Y, Tachibana T, Okaue M, Tanaka H. et al. Uncommon dermoid cyst presented in the mandible possibly originating from embryonic epithelial remnants. J Oral Pathol Med. 2002;31:184-7.
3. Bodner L, Woldenberg Y, Sion-Vardy N. Dermoid cyst of the maxilla. Int J Oral Maxillofac Surg. 2005;34:453-5.
4. Pryor SG, Lewis JE, Weaver A, Orvidas LJ. Pediatric dermoid cysts of the head and neck. Otolaryngol Head Neck Surg. 2005;132:938-42.
5. Shaari CM, Ho BT, Shah K, Biller HF. Lingual dermoid cyst. Otolaryng Head Neck Surg 1995;112:467-8.
6. Paradis J, Koltai PJ. Pediatric teratoma and dermoid cysts. Otolaryngol Clic North Am. 2015;48(1):121-36.
7. Gordon PE, Faquin WC, Lahey E, Kaban LB. Floor-of- mouth dermoid cysts: report of 3 variants and a suggested change in terminology. J Oral Maxillofac Surg. 2013;71(6):1034-41.
8. 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(5):567–76.
9. Di Francesco A, Chiapasco M, Biglioli F, Ancona D. Intraoral approach to large dermoid cysts of the floor of the mouth: a technical note. Int J Oral Maxillofac Surg. 1995;24(3):233-5.
10. Martins S, Neto T, Soares JY, Balhau R. Large dermoid cyst of the floor of the mouth. An emphasis on differential diagnosis. Rev Esp Cir Oral Maxilofac. 2019;41(3):149-52.
11. Lima SM Jr, Chrcanovic BR, de Paula AM, Freire-Maia B, Souza LN. Dermoid cyst of the floor of the mouth. Scientific World J. 2003;3:156-62.
12. Hibelot D, Doger De Speville E. Giant dermoid cyst of the buccal floor: A case report. J Oral Med Oral Surg. 2025;31: 2.
13. Patel H, Mayl J, Chandra B, Pritchett C, Chandra T. Dermoid of the oral cavity: case report with histopathology correlation and review of literature. J Radiol Case Rep. 2016;10(12):19-27.
14. Makos C, Noussios G, Peios M, Gougousis S, Chouridis P. Dermoid cysts of the floor of the mouth: two case reports. Case Rep Med. 2011;2011:362170.
15. Alyamani A, Cagsom FS. Dermoid cyst of the floor of the mouth; Different treatment approaches. Saudi J Otorhinolaryngol Head Neck Surg. 2006;8(2):55-8.
16. Pryor SG, Lewis JE, Weaver AL, Orvidas LJ. Pediatric dermoid cysts of the head and neck. Otolaryngology--head and neck surgery. J Am Acad Otolaryngol-Head Neck Surg. 2005;132(6):938-42.

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