

An atypical case of floor of the mouth dermoid cyst in an adolescent female

Niharika Prasad, MD*

Radiodiagnosis, Jawaharlal Nehru Medical College, Belagavi, India.

Email: vats.niharika248@gmail.com

Abstract

This case report highlights the description of a unilocular dermoid cyst in floor of the mouth mimicking a ranula and epidermoid cyst clinically and on imaging. Typical and atypical findings of the same have been described along with brief mention of management of such lesions. While CT is useful for evaluating depicting mandibular cortical bone erosion and destruction and submandibular duct calculi, MR imaging provides better soft-tissue resolution than CT and is particularly useful for staging oral cavity malignancies that involve the floor of the mouth and complex disease processes that extend through multiple anatomic spaces.

Keywords

Oral; dermoid cyst; MR; CT

Abbreviations

CT: computed tomography, MR: Magnetic resonance

Introduction

The floor of the mouth is the space between the mucosal surface and the mylohyoid muscle sling and comprising both structures. Detailed imaging is important to be able to arrive to a correct diagnosis and surgical plan for the various pathologies that occur in this area.

Case presentation

A 14-year old female presented with dysphagia in the past three months. Clinically, there was a midline swelling in the floor of the mouth, showing soft consistency and smooth surface. There were no inflammatory changes in the oral mucosa and no cervical lymphadenopathy.

Ultrasonography revealed a cystic swelling with fine internal echoes and no vascularity within it. Plain and contrast Magnetic Resonance Imaging (MRI) of the oral cavity and neck was performed. The lesion was unilocular and hypointense on coronal T1 weighted image. It was hyperintense on T2 with T2 hypointense corpuscles inside the midline cyst which indicates “sac of marbles sign.” Sagittal T2 weighted image showed the lesion to be located above the mylohyoid muscle displacing the tongue posteriorly. Dilatation of adjacent Wharton’s ducts was noted bilaterally due to mass effect by the lesion. No enhancement was seen on postcontrast T1 weighted image. The lesion was proved to be dermoid cyst on histopathological examination.



Figure 1: Coronal T1 weighted image showing a large unilocular, hypointense midline cystic lesion in the floor of the mouth.

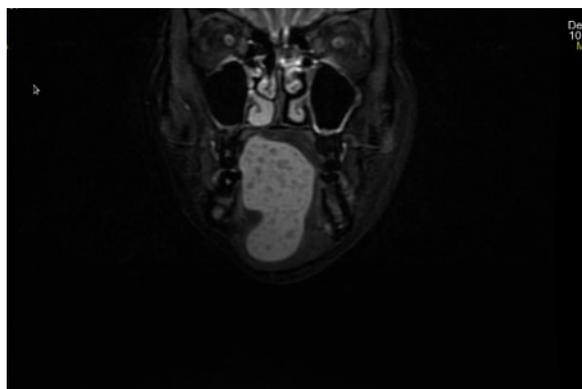


Figure 2: T2 STIR coronal image shows a T2 hyperintense cystic lesion with hypointense corpuscles which indicates “sac of marbles sign.”



Figure 3: Sagittal T2 STIR weighted image shows the tongue being displaced posteriorly due to mass effect by the lesion.

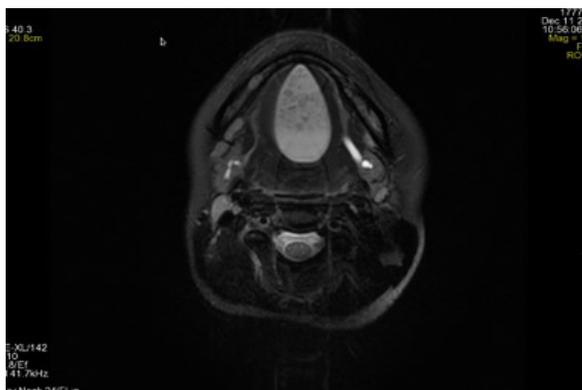


Figure 4: Axial T2 STIR weighted image shows ectasia of bilateral Wharton’s ducts.

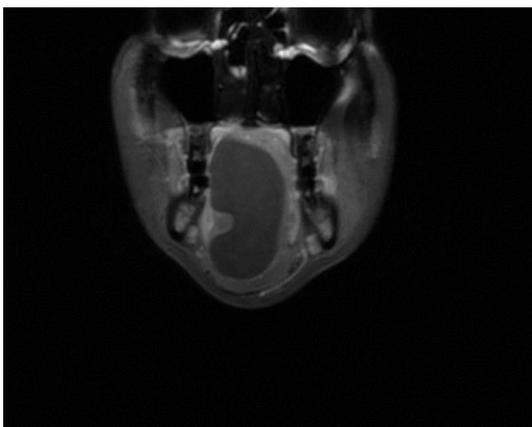


Figure 5: Postcontrast coronal T1 weighted image shows no enhancement of the lesion.

Discussion

Dermoid cysts usually show heterogeneous contents. Fat content in dermoid cysts often collects in globules, lending the cysts an MR imaging appearance like that of a sack of marbles [1]. Because these lesions may also become secondarily infected and in rare cases may undergo a malignant change, complete enucleation is advisable [2]. The approach may be intraoral, extraoral or a combination of both [3].

Ranulas are retention cysts arising from a sublingual gland or accessory salivary glands and evidence of a beak of the cyst towards the sublingual space (tail sign) is considered typical. The diagnosis of an oral abscess is easily suspected in the appropriate clinical background; uninoculated or multiloculated fluid collection with an enhanced rim is seen on post contrast images [4]. Epidermoid cysts show diffusion restriction, however dermoid cysts may also show restriction due to their cystic nature.

Cross sectional imaging best delineates the internal architecture of dermoid cysts and facilitates exact visualization of the location of such lesions in relation to the surrounding anatomy to guide surgical management [5].

Final diagnosis: Dermoid cyst

Differential diagnosis: Ranula, Epidermoid cyst

References

1. La'Porte SJ, Juttla JK, Lingam RK. Imaging the floor of the mouth and the sublingual space. *Radiographics*. 2011; 31: 1215-1230.
2. Dillon JR, Avillo AJ, Nelson BL. Dermoid cyst of the floor of the mouth. *Head and neck pathology*. 2015; 9: 376-378.
3. Makos C, Noussios G, Peios M, Gougousis S, Chouridis P. Dermoid cysts of the floor of the mouth: Two case reports. *Case reports in medicine*. 2011.
4. Leonardo G, Sergio S, Ugo B. Dermoid Cyst of the Floor of the Mouth: Diagnostic Imaging Findings. *Cureus*. 2018.
5. Patel H, Mayl J, Chandra B, Pritchett C, Chandra T. Dermoid of the oral cavity: case report with histopathology correlation and review of literature. *Journal of radiology case reports*. 2016; 10: 19.

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Authors Information: Niharika Prasad, MD
Radiodiagnosis, Jawaharlal Nehru Medical College, Belagavi, India

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