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Dermoid cyst of floor of mouth- A case repot

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ABSTRACT

Dermoid cysts are rare entity observed in oral cavity. In the head and neck region dermoid cyst is most commonly found at the lateral eye brow followed by floor of mouth. Histologically they can be categorized into epidermoid cyst, dermoid cyst and teratoma. Here we report a case of 28 years female who reported to us with a chief complaint of swelling in floor of mouth causing difficulty in swallowing and speech. Aspiration of swelling produced a keratin containing granular liquid. CECT was advised which showed a well-defined cystic lesion. Lesion was excised by extra oral submental incision under general anesthesia. Histologic examination showed dermoid cyst. After 4 months of follow up, there was no recurrence. Although this case could have been done intraorally we did it by submental incision to prevent the inadvertent iatrogenic injury to salivary gland ducts and other complications related to trans oral excision.

Keywords: Dermoid cyst, Submental incision, Contrast enhanced computed tomography (CECT)

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INTRODUCTION

Dermoid cyst is a form of cystic teratoma which is lined by epithelium and it contains skin appendages like hair, sebaceous gland and teeth. Epidermoid cyst is different from dermoid in the way that it does not contain skin appendages. The incidence of dermoid cyst in the floor of mouth accounts for 23-34% of head and neck dermoid cyst[1], lateral eye brow being the most common site. These cysts are mostly midline and rarely found lateral in position. The midline dermoid may be present above the mylohyoid and geniohoid musle causing bulge in the floor of mouth and difficulty in mastication, swallowing, speech and in severe cases difficulty in breathing. When dermoid cyst is found below the geniohyoid and mylohyoid muscle it imparts an appearance of double chin.

These cysts occur in second/ third decades of life of the patients. Clinically it is a slow growing asymptomatic lesion and patients seeks attention when it has grown into a considerable size. On palpation it imparts dough like feel. Differential diagnosis for dermoid cysts include lipoma, salivary gland tumor, ranula, lymphoepithelia cyst, thyroglossal duct cyst and infection. Definitive diagnosis can be done by FNAC and use of imaging like USG, Computed tomography or MRI.

Treatment for dermoid cyst is surgical excision which can be done intraorally or extra orally depending on the location of cyst above or below the mylohyoid muscle. However intraoral surgical removal may have a complication of salivary duct injury.

Here we described a case of sublingual dermoid cyst treated by extraoral submental incision due to its advantages of optimal surgical access, simpler dissection, improved hemostasis, minimal morbidity and prevention of iatrogenic injury to salivary gland ducts when performed intraorally.

Case report:

A 28 years old female presented to our OPD with a chief complaint of swelling at the chin and below the tongue. The patient wanted treatment for the sake of aesthetic reason and difficulty in speech and swallowing. According to patient she noticed swelling 3 months back which was initially small and gradually increased to the present size. No significant medical history was found. On physical examination there was an obvious extra-oral swelling in the submental region of size about 6.5x 4 cm giving an image of double chin (figure 1a). The swelling was soft, non-pulsatile, non-tender and free of overlying skin and deep structures. There was no impulse on coughing. No lymphadenopathy was found. Upon intraoral examination a large smooth swelling in floor of mouth with superior displacement of tongue was found. There was no mucosal abnormality (figure1b).

Figure1a: Note the submental swelling

Figure 1b: Swelling of floor of mouth with superior displacement of tongue

Upon aspiration white granular material was sent for FNAC which was consistent with dermoid cyst. Contrast enhanced CT scan was advised to patient which showed a well-defined hypodense non enhancing lobulated cystic lesion of size (approx. 6.3 x 3.5 x 4.4 cm, AP x T x CC) in the floor of oral cavity extending between the mylohyoid muscles into the sublingual space (figure 2).

Figure 2: Axial and coronal section of CT scan showing well defined lobulated cystic lesion in floor of mouth.

Rest of investigations were normal. Patient was operated under general anesthesia and nasotracheal intubation. After part preparation and draping, Xylocaine with adrenallin (1: 80,000) was infiltrated in the submental region and a transcervical incision was used to expose the mass. Blunt dissection was carried out all around the lesion and specimen was delivered out in Toto (figure 3). After hemostasis, surgical wound was closed in layers and pressure dressing applied.

Figure 3: showing intraoperative view and excised specimen of lesion.

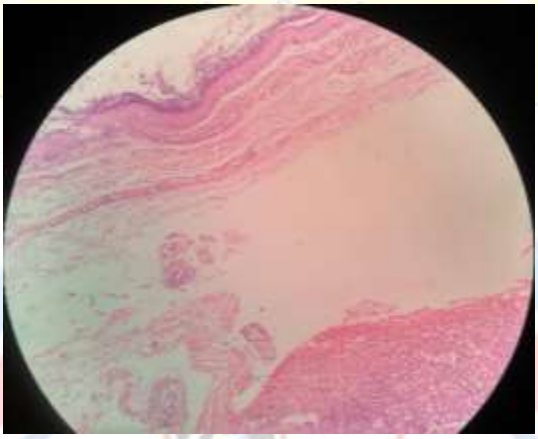

Figure 4: 10x H&E staining showing Cyst with keratinized squamous epithelium and adnexal Structures in wall

Post-operatively, antibiotic and analgesic was administered to the patient for 5 days and sutures were removed on 7th post-operative day. The healing was uneventful.

The excised specimen was sent for histopathological examination that showed the lining as a stratified squamous epithelium with keratin filaments and there was a presence of sebaceous glands (Figure 4). Hence diagnosis of dermoid cyst was confirmed. The patient is under follow-up and no recurrence has been observed.

The first documentation of dermoid cyst in the head and neck region especially in floor of mouth can be traced since 1778 as referenced in jourdian's book[2]. Histologically epidermoid cyst is different from dermoid in the way that it does not contain skin appendages. Clinically dermoid cysts are benign, painless and slow growing cystic lesions presented by patients in 2nd to 3rd decades of life. Dermoid cyst can be differentiated by ranula by simple aspiration. Aspirated fluid in dermoid cyst is white granular and cheesy in nature. Differential diagnosis of dermoid cyst includes ranula, thyroglossal duct cyst, cystic hygroma, lymphangioma, and benign & malignant lesion of mucosa and salivary gland[2, 3, 4]. Diagnosis of the lesion is usually made by history, physical examination, aspiration and use of various imaging like

ultrasonography, CECT and MRI[5, 6]. CT and MRI is more valuable because of its superior localization of cyst in relations to geniohyoid and mylohyoid muscles. When located above the muscle, the cyst manifests itself as a sublingual swelling; when below the muscle, the clinical aspect will be a submental swelling. Main line of treatment of dermoid cyst is surgical excision. The surgical approach may be introral or extraoral, depending upon the location and size of dermoid cyst.

In the case of an intraoral approach, a midline vertical, mucosal incision is performed along the ventral surface of the tongue; however, only small cysts can be enucleated using this kind of incision[7]. The extra oral approach is generally preferred in the case of median geniohyoid or very large sublingual cysts, whereas the intraoral approach is typically used for smaller sublingual cysts[8].

In our case we used extraoral submental incision because of large size of the cyst and to prevent complications associated with intraoral incision. Intraoral incision may damage structures in sublingual space like salivary gland duct, have more potential for infection compared to extraoral incision, sinus formation, limited accessibility and more postoperative edema which may compromise the airway of the patient in postoperative recovery phase.

The advantages of extraoral incision includes optimal surgical access, simpler dissection, improved hemostasis and minimal morbidity. The postoperative course does not present any kind of problem because there is little alteration in function, edema is generally modest, and complications are unusual. Certainly, for large cysts the transcervical approach is favored, providing superior access and ease of delivery of the lesion[9, 10, 11]. The extraoral approach consists of a submental incision and a sharp, blunt dissection to reach and excise the lesion. McGregor describes a symphyseal mandibular osteotomy to enucleate a very large sublingual dermoid cyst[12].

The only disadvantage associated with this approach is extraoral scar which is usually minimal and hidden in the submental region if planned properly.

CONCLUSION

Dermoid cyst in floor of mouth is a rare entity and needs differentiation from several other lesions like ranula, thyroglossal duct cyst, cystic hygroma, lymphangioma, and benign & malignant lesion of mucosa and salivary gland. Diagnosis is based on history, physical examination, aspiration and use of imaging like USG, CT or MRI. Treatment of dermoid cyst is surgical excision either via intraoral or extraoral route depending on the position of lesion relative to mylohyoid muscle. In this case report we used extraoral transcerival incision and found advantages of optimal surgical access, simpler dissection, improved hemostasis and minimal morbidity.

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