Otolaryngology online journal

ISSN: 2250-0359 Volume 5 Issue 3 2015

A CASE OF GIANT SUBLINGUAL DERMOID CYST ORIGIN FROM THE MANDIBULAR SYMPHISIS: THE COMBINED SURGICAL APPROACH

Selçuk Güneş,Mustafa Çelik,Yakup Yegin,Kamil Hakan Kaya,Mustafa Suphi Elbistanlı, Fatma Tülin Kayhan

Bakırköy Dr.Sadi Konuk Training and Research Hospital, Istanbul, Turkey

ABSTRACT

Dermoid cyst can also be seen head and neck region although it is generally seen in testis and ovary. The most common location in the head and neck region is the external third of the eyebrow. Sublingual location is very rare. Surgical treatment is by enucleation via intraoral or extraoral approach.

We present herein a case of giant sublingual dermoid cyst, origin from the mandibular symphisis is by enuclation via different approach that intraoral and extraoral approach are combined and reviewed the relevant literature.

Introduction:

Dermoid cyst of the oral cavity represent very rare. It represents rarely in the head and neck region although it is generally located in testis and ovary. It is encountered throughout the body, with 7% occurring in thus region and 1,6% within the oral cavity.

It represent less than 0.01% of all oral cavity cysts. We reported a case of giant dermoid cyst origin from the mandibular symphysis in 25-years-old man that was successfully removed by different approach is combined both intraoral and extraoral approach.

Case Report:

A 25-year-old man patient presented with progressively growing solitary swelling below his tongue, difficulty in eating, breathing and swallowing since for six mouths. Oral cavity examination revealed the presence of a soliter, nontender, fluctuant, soft , immobile and the overlying mucosa showed no changes , approximately 8x5 cm mass in the floor of the mouth. (Figure 1) There were no inflammatory signs or lymphadenopathy associated with the mass. His general and systemic examination was unremarkable. The suspected diagnosis was ranula due the similarity to localization and characteristics of mass. Initially, the needle aspiration was performed to sample from cyst contents but no material was collected. Based on this, the possibility of a solid or a cystic lesion with semisolid component was considered.

Computerized tomography(CT) scan was performed and it revealed a 85x75 mm ,thin walled cystic lesion in middle, extending mylohyoid muscle in the sublingual area.(Figure 2a,b) The patient underwent surgery via intraoral approach under general anesthesia with nasotracheal intubation. At the operation, a cyst from the inferior edge of the mandibular symphysis to under mylohyoid muscle was detected. Based on total surgical enucleation could not done via intraoral approach, so extraoral approach was combined by intraoral approach.

The cyst was completely exposed and a caudal herniation through the under myolohyoid muscle was seen. Sharp and blunt dissection was used to free to cyst with traction and counter-traction ,and it was completely removed intact (Fig.3). Histopathological findings revealed dermoid cyst. Postoperative complications and recurrence was not observed including 1-year follow-up.

Informed Consent:

Written informed consent was obtained from the patient who participated in this case

Discussion:

In oral cavity, dermoid cysts are accepted as nonodontogenic lesions and about 1,6% and 7% occur in head and neck region ,among them 23% are found at the floor of mouth. The most common location in the head and neck region is the external third of the eyebrow and the floor of mouth is the second most common location in thus area. [1]

Many theories about pathogenesis of head and neck dermoid cysts have been suggested and they are caused by the retention of germinal epithelium during development of mandible and hyoid branchial arches. [1] In generally, they are diagnosed in the second and third decades of life, however, they can present at any age with the equal frequency of occurrence is both genders. [1,2]

Their dimensions may vary from a few millimetres to a few centimetres and depending of sizes and location, they can cause dysphagia, dysphonia and dyspnea. Clinically, they represent as nontender slow-growing mass at the floor of mouth.

However, in the literature, sudden increasing in the size of these lesions were reported.[3]

Anatomically, dermoid cysts at the floor of mouth are distinguished in three types as sublingual, submandibuler and submental cyst. [1]

The differential diagnosis of sublingual lesions is important because of their surgical treatment is not exactly the same in all of them, and consists of several lesions as severe infectious process, ranula, neurofibroma, haemangioma, lipoma, cystic hygroma, thyroglossal duct cyst, tumors, salivary lesions, mucocele. [2] In this case, at first we considered ranula for this lesion , but histopathological examinations revealed dermoid cysts.

The conventional radiography is not given enough information for differential diagnosis of sublingual lesions. CT and magnetic resonance imaging scan allow to provide enough information lesions in relationship to the myolohyoid and geniohyoid muscles, and recommend the surgical technique. [4] However, in some cases, the radiological examination is not enough for exact diagnosis as in this case. In the tomography section , dermoid cysts are detected as thin-walled, sharply circumscribed and encapsulated lesion. [4]

Some surgical technique and management have been performed for dermoid cyst at the floor of the mouth. [1] In generally, two approach is described as intraoral and extraoral. An intraoral approach is recommended by most authors for sublingual cyst that less than 6 cm above mylohyoid muscle.

The extraoral approach is recommended for large dermoid cysts in submandibuler and submental,and large sublingual cyst extending myelohyoid muscle. The intraoral approach is leaded less cosmetic problems than extraoral approach. [5] But in some cases, both two approach was used for enuclation. In this case, we planned enucleation via intraoral approach ,but contingent on intraoperative findings, we continued to removal via extraoral approach . In the literature, we found less document about by enuclation via combined approach. As described in the literature previously, the extraoral approach could be combined with intraoral approach unless total enuclation could be done by intraoral approach. [7] We recommend this approach for extending though to myelohyoid muscle, to expose better and to understand relationship between surrounding tissue with lesion.

Recurrence is very rare with complete excision of the lesion with capsule, but a 5% rate of malignant transformation of oral dermoid cyst have been reported in literature. [6] In our case, no recurrence and complications was observed including 1-year follow-up.

Conclusion:

The differential diagnosis of sublingual lesions must be made in elaborate. The appropriate imaging should be done to identify appropriate surgical technique. Combined approach is useful procedure in some cases, however, surgical procedure can change contingent on intraoperative findings. Patients should be follow-up because of possibility of malignant transformation.

Fig 1 Preoperative view of the sublingual mass

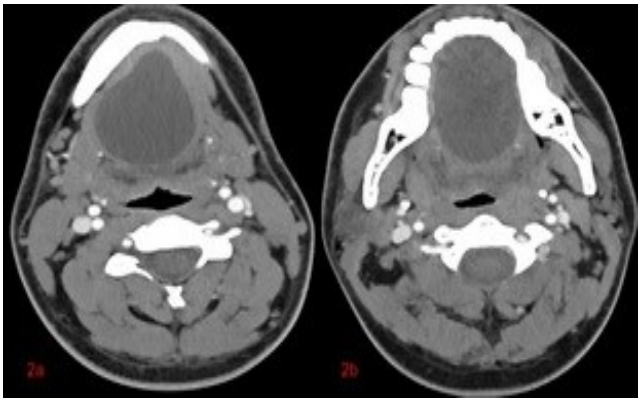

Fig 2 The view of sublingual mass on CT imaging.

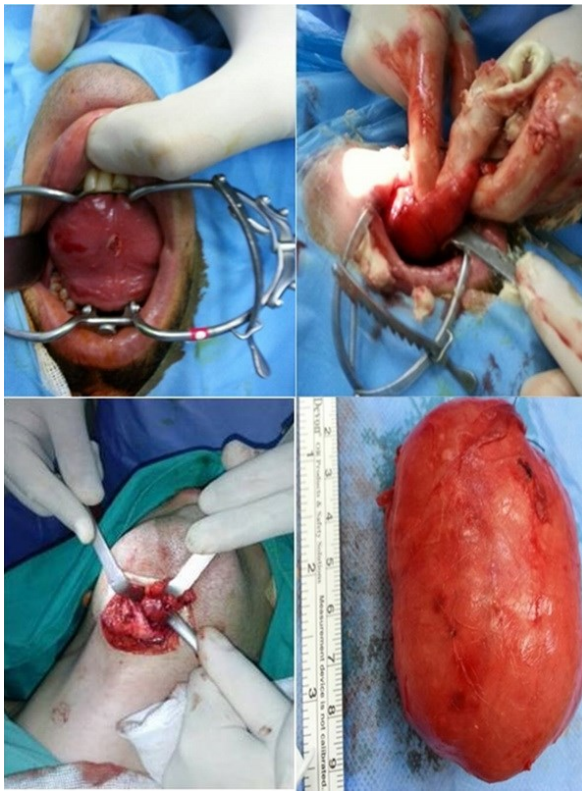

Fig 3 showing surgical steps

References

1-Jain H, Singh S, Singh A. Giant sublingual dermoid cyst in floor of the mouth. J Maxillofac. Oral Surg. (Apr-June 2012) 11(2):235-7

2-Verma S, Kushwaha JK, Sonkar AA, Kumar R, Gupta R. Giant sublingual epidermoid cyst resembling plunging ranula. Natl J Maxillofac Surg 2012;3:211-3

3-Tuz M, Dogru H, Uygur K ,et al. Rapidly growing sublingual dermoid cyst throughout pregnancy. Am J Otolaryngol 2003;24:334-7.

4-Lev S, Lev MH. Imaging of cystic lesions. Radiol Clin North Am 2000;38:1013-27.

5-I.E. El-Hakim and A.Alyamani. Alternative surgical approaches for excision of dermoid cyst of the floor of mouth. Int J Oral Maxillofac Surg 2008 ;37 (5):497-99.

6-Devine JC, Jones DC. Carcinomatous transformations of a sublingual dermoid cyst. A case report. Int J Oral Maxıllofac Surg 2000;29:126-7.

7-MacNeil SD, Moxham JP. Review of Floor of Mouth Dysontogenic Cysts. Ann Otol Rhin Laryngo 119(3):165-73