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ENT

A CLINICAL CASE OF RANULA WITH A HISTOLOGICAL SURPRISE

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ABSTRACT Epidermoid cysts are benign subcutaneous lesions and represent less than 0.01% of all oral cavity lesions1,2,3,4. These cysts are defined as epidermoid when the lining represents only epithelium. In this article we present a case of a 14 year old girl who came to otorhinolaryngology OPD , with complaints of a mass in the oral cavity, since 7 months . The mass was seen in the floor of the mouth and externally in submental area 1cm above the hyoid bone vertically. On examination , a globular swelling of size approximately 4X3cm , which was initially peanut size in oral cavity and had gradually progressed to the size of a lemon , which was soft to cystic in consistency, mobile, non tender , displacing the tongue superiorly was seen. The transillumination test was positive. The swelling showed visible vessels, but had No erythema, no visible discharging sinus/pus. It was not associated with dysphagia, odynophagia, breathlessness, hoarseness of voice . Under general anesthesia and intubation, the surgical excision of the mass was done. Intraorally, transverse incision was taken just below the level of right lower lateral incisors to lower left lateral incisors and the specimen was delivered from the floor of the mouth. Histopathological examination was consistent with epidermoid cyst .The patient did well postoperatively.

KEYWORDS : ranula, neck swelling, epidermoid cyst.

INTRODUCTION

Epidermoid cysts present as a characteristic double chin[5]. These are generally diagnosed in young adults in the second and third decades of life, although the case presented here was an 14 year old girl.

The onset of the cysts tend to increase at the age when the activity of skin adnexa such as sebaceous gland and sweat glands are activated , usually after puberty. The subjective symptoms started developing in her early 2nd decade , with no history of trauma or inflammation prior. Therefore the cause here remains unknown. The cyst is slow growing and usually doesnot cause any dysfunction like dysphagia, dysphonia, dyspnea until its relatively huge[6]. Thus the period of time until a hospital visit is delayed and the cyst is usually huge at the time of presentation[7].

Histologically, midline dermoid cysts of the floor of the mouth are classified according to Meyer's classification, thus dividing them into three groups: epidermoid cysts, which consist of an epithelial-lined wall that may be partly keratinized; dermoid cysts, which are epidermoid-like cysts but show evidence of skin appendages, such as hair follicles, hair, sweat, and sebaceous glands; and teratomas, which contain, in addition to skin appendages, mesodermal elements such as bone, muscle, respiratory and gastrointestinal tissues, and a fibrous capsule[8].The latter type is the only variety that may have a malignant change.

Anatomic classification divides the cysts of the floor of the mouth into three groups according to their relation to the muscles of the floor of the mouth : sublingual or median genioglossal cysts, located above the geniohyoid muscles; median geniohyoid cysts, located in the submental region between the geniohyoid and mylohyoid muscles; and lateral cysts, located in the submaxillary region[9,10].

CASE STUDY

A 14 year old female patient was admitted under otorhinolaryngology department with complaints of a mass in the oral cavity and the same swelling was noticed submentally since 7 months .The swelling was insidious in onset , gradually progressive and initially approximately of size 1x1cm which progressed to a size of 4x3cm over a period of 7 months. It was not associated with any aggravating or relieving factors. There was no history of similar complaints in the past , any previous surgery or trauma to the oral cavity or neck. No history of dryness of mouth , difficulty in speech, dysphagia, odynophagia or dyspnoea. No significant past , personal , family history.

The general physical examination was normal.

On examination of the oral cavity, a soft cystic, non mobile, non tender mass approximately of size 4x3cms present in the sublingual region which moved with protrusion of tongue and deglutition was seen . the surface of the swelling was smooth, no ulcer present. The swelling did not bleed on touch. The swelling was not associated with local rise of temperature and no sinus or fistula was seen over the swelling. Transillumination was positive. The lips, gums , teeth , gingivobuccal sulcus and gingivolabial sulcus , oropharynx were normal. On examination of neck , the same swelling of approximately 4x3 cm was noted in the submental area extending from 1cm above the hyoid bone upto 1cm inferior to the submentum.(Fig no 1) The skin over the swelling was normal and surface was smooth. No discharging sinus. No signs of inflammation. The swelling was non reducible and did not increase on cough reflex. No other visible swellings or neck nodes were palpable. The Ear and Nose examination showed no abnormality.

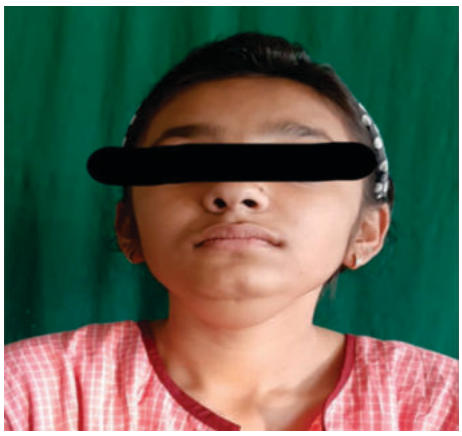

Fig No 1

Based on the above clinical findings and examination, a diagnosis of plunging ranula was made.

Blood and urine routine investigations were normal.

USG neck was done and it showed thin walled submandibular midline

cystic lesion extending upwards between the geniohyoid muscle into the sublingual space , showing upward movement on deglutition , protrusion of tongue. Possibilities are plunging ranula and thyroglossal duct cyst. Multiple tiny colloid cysts in both lobe of thyroid gland .

The MRI neck showed a well defined thin walled non enhancing cystic lesion approximately measuring 5.6x3.8x4.2cm (CCxAPxTR) in the midline of the neck centred in the floor of mouth s/o benign lesion ? Ranula and ? Epidermoid cyst.

The patient was subjected to surgical excision of the swelling intraorally under general anesthesia. Jennings mouth gag was applied to visualise and expose the swelling in the floor of the oral cavity. A 1:100000 adr Infiltration was given over the swelling . a transverse incision was taken from lower right lateral incisors to lower left lateral incisors. The mylohyoid muscle was dissected and retracted laterally . The dissection was done in plane and specimen was delivered from the floor of the mouth.(Fig no 2) The swelling was 6x5 cm in size. Ranula was excised in toto by marsupialization.(Fig no 3) The resultant defect was closed in layers after ensuring hemostasis.

The specimen for HPE on examination showed acidophilic stratum corneum and basophilic dot like staining of stratum granulosum were seen , suggestive of features consistent with epidermoid cyst .

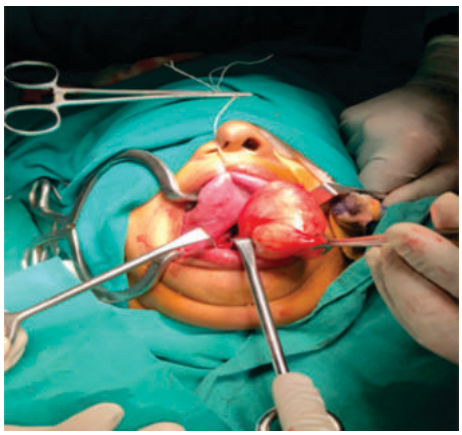

Fig no 2

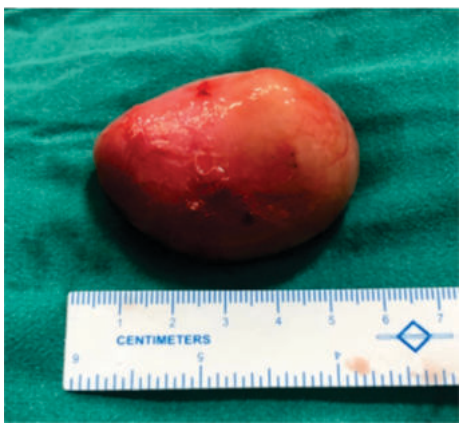

Fig no 3

DISCUSSION

The differential diagnosis of sublingual lesions includes: Ranula, lymphatic malformation, dermoid cyst, epidermoid cyst, heterotopic gastrointestinal cyst and duplication foregut cyst[11,12,13,14,15].

USG is reliable , economical and is usually the first line of investigation. The diagnosis of certain sublingual swellings becomes more challenging, imaging techniques may be useful[9] . CT and MRI help in precise localization of the lesion , helping the surgeon to choose the appropriate surgical method[9]. Surgical excision of the cyst remains the generally selected method of treatment[2]. It is reported that , if at the time of removal the cyst capsule remains there are chances of recurrence, whereas if removed entirely no recurrence was seen[2] . Incision and drainage/puncture are not recommended because they cause infection or recurrence[2].

Alternatively, Marsupialization with intralesional packing can be done[11].The anatomical location of the cyst becomes an important factor when selecting the surgical approach[9,4].Based on the relationship with the mylohyoid muscle, intraoral method (for sublingual types) and extraoral method(submental type) and intra and extraoral methods for submandibular types is used[9,4].

In our case the cyst was located above the mylohyoid muscle and designated as sublingual type , so intraoral excision of the cyst was done. Surgical enucleation was done which is the only effective treatment for these kinds of lesion

The patient followed was up after 6 months with no history of recurrence. The intraoral approach is the best surgical approach for sublingual epidermoid cysts. Prognosis is very good, with a very low incidence of relapse[16].

In national journal of maxillofacial surgery, an article about giant sulingual epidermoid cyst resembling plunging ranula showed a case of a 16 year old girl with complaints of a mass in the sublingual region, difficulty chewing, and dysphagia for 5 months. Fine needle aspiration cytology showed keratin flakes and proteinaceous material. Contrast enhanced CT of oral cavity showed 7x5x4.5cm well circumscribed non enhancing cystic mass extending into the floor of the mouth. It was firm, seen in the submental area, extending till the thyroid notch . the diagnosis of epidermoid cyst was made based on the histological finding .

In a similar article about sublingual epidermoid cyst mimicking as plunging ranula- a case report in the international journal of dental science and research, said a 30 year old male patient came with complaints of a slowly growing mass in the floor of the mouth, extending into the submental and submandibular regions. The complete surgical excision of the lesion was done via transcervical approach. Here the diagnosis was made based on the histopathology revealing cystic fibrocollagenous tissue covered by squamous epithelium containing some keratin flakes.

In a ear, nose, throat journal , a very interesting case report was published of a sublingual epidermoid cyst of a 22 year old male who presented with swelling in the floor of the mouth with difficulty while eating since 4 months. The MRI brain, face, and neck showed a well defined, non-enhancing cystic mass measuring 6.6cm x 4.5 cm that was seen beyond the sublingual area. Histopathology revealed features consistent with epidermoid cyst [14,15,16].

CONCLUSION

Though epidermoid cyst is a rare tumour, it should be kept in mind if the patient presents with a midline neck swelling.

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