SUB-LINGUAL DERMOID CYST

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ABSTRACT : *Dermoid cysts are commonly found through out the body. In the oral cavity, though rare, dermoids commonly present sublingually. Typically, they present as slow growing masses, causing elevation of the tongue, interference with speech and swallowing. We report a case of sublingual dermoid cyst in a two years old female child.*

Key Words: *Dermoid cyst, sublingual*

INTRODUCTION

Dermoid cysts derived from germinal epithelium can occur throughout the body. They are bigerminal, arising from ectoderm and mesoderm.They have an adipose matrix, skin and epidermal appendages. In the head and neck, most common site is the lateral eye brow and the oral cavity. Anterior portion of floor of the mouth is the commonest site.

Dermoid cysts of the floor of the mouth are dysembryogenetic lesions derived from entrapment and subsequent growth of epithelial cells during the midline fusion between the first and second branchial arches in the third and fourth embryonic week. Acquired forms are derived from iatrogenic or traumatic inclusion of epithelium and skin appendages[1].

The sublingual dermoid cyst is located in the midline under tongue, above the genio-glossus muscles. As the cyst grows, swelling of the floor of the mouth appears and the tongue is pushed up and backwards.

CASE REPORT

A two year old female child presented with a painless swelling of the floor of the mouth. Her mother reported that the swelling had been small in size at birth and gradually increased in size. There was no history of difficulty in feeding, No history of noisy breathing or snoring . Presently the child could be fed by pressing the tongue down with the finger and pushing the food posteriorly.

On clinical examination 3 x 3 cm. swelling was seen on the floor of the mouth. It was cystic in consistency, non tender, not fluctuant and it did not transilluminate. Overlying mucosa looked normal. Tongue was pushed upwards and posteriorly (Fig.I). Needle aspiration showed that the cyst contained thick , whitish, creamy fluid. A provisional diagnosis of sublingual dermoid cyst was made. Since the Anaesthetist found difficulty in

Fig I Cyst in the floor of the Mouth

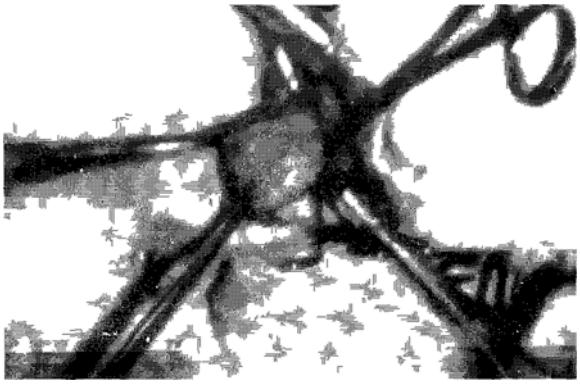

Fig II Cyst after complete enucleation

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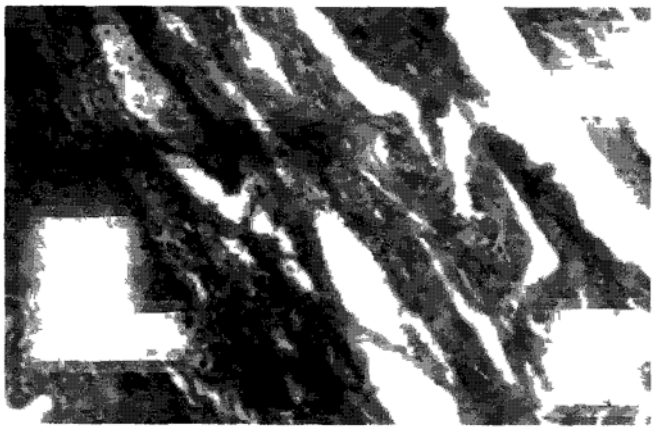

Fig III HPE Showing ectodirmal appendages and fibro collagen tissues

intubation, the size of the cyst was reduced by aspiration After the oral intubation, the cyst was refilled with normal saline for easy surgical dissection The tip of the tongue was held with sponge holding forceps and was pulled forwards and upwards Horizontal incision was made in the floor of the mouth under tongue over the swelling The cyst was exposed by sharp and blunt dissection and enucleated completely (Fig II) The cyst measured 4 x 4 x 2 cm , and was lying on the Genioglossus muscle Bleeding was minimal and the wound was sutured in layers

Post-operative healing was uncomplicated and the baby was discharged after fourth post operative day There was no evidence of recurrence 18 months later

Gross pathological examination showed that the cyst contained clear thick fluid with homogenous white paste like substance lining the wall

On histological examination, cyst wall was found to be lined by keratinizing stratified squamous epithelium and contained skin appendages consistant with the diagnosis of a dermoid cyst (Fig III)

DISCUSSIONS

Dermoid cysts arising in the oral cavity are relatively rare entities In a review of 1459 cases of dermoid cysts removed at the Mayo clinic, New and Erich found that only 1 6% involved the oral cavity and ¼th of those within the oral cavity arose from the floor of the mouth [6] Taylor et al studied 541 dermoid cysts of the head and neck and found that only 6 5% were intraoral[2] Shore reported only 4 cases of sublingual dermoid in a review of 54,000 surgical specimens[3]

The differential diagnosis includes ranula, blockage of a submandibular salivary duct, cystic hygroma, thyroglossal duct cyst, branchial cleft cyst and a detached bronchogenic cyst As the lesion was not fluctuant and did not transilluminate based, on the appearance of the aspirate we made a provisional diagnosis of dermoid cyst

The origin of dermoid cysts are embryological It has been suggested that dermoid cysts are derived from epithelial debris or nests that are trapped during the midline closure of the first and second branchial arches Shafer et al[4] attributed the non-epithelial structures that is found in the dermoid cysts, to the entrapment of totipotent cells in the midline during the closure of the first and second arches-a view also shared by Ettinger and Manderson[5]- who however, differentiated dermoid cyst into congenital and acquired The congenital type arose during the developmental fusion in the body, while the acquired type resulted from some previous injury that drove epithelial cells into the dermis The history in the present case seems to suggest that the dermoid cyst was congenital

The only effective treatment for sublingual dermoid is surgery, consisting of complete enucleation The point under discussion is the choice of surgical approach, whether intra or extra oral via a skin incision in the submental region A common guideline in the past[6 9] but still followed to-day [7 8] is to perform an intra oral incision of small cysts, whereas an extra oral approach is recommended for larger cysts The reason for this choice is the fear of not being able to obtain adaquate exposure of the surgical field with the risk of incomplete removal of the cyst In our case we delivered the cyst by an intra oral approach

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