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Case Study

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DENTAL LAMINA CYST - A CASE REPORT

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INTRODUCTION

New-borns are frequently found to have intra-oral mucosal findings of different morphological and developmental origin. Some intraoral cystic lesions are transient in nature. Among these transient cystic lesions Bohn's nodules, Epstein pearl, and Dental lamina cysts of new born are the most common ones.[1]

Dental lamina cyst is a true cyst as it is lined by thin stratified squamous epithelium and shows a lumen usually filled with desquamated keratin. Dental lamina cysts are usually found on alveolar ridge of new-born or infant which is originated from remnants of dental lamina.[2] These cysts disappear within two weeks to five months of postnatal life and rare to be seen after this period.[3]

CASE REPORT

A healthy child, 4 months of age, reported at Dhidhoo atoll hospital, MOH, Maldives with chief complain of cold and cough. Mother was also concerned about the white-yellowish swelling on right lower gum pad region noticed one week back.

On examination of oral cavity, it was found to be a white-yellowish nodule present on the crest of right lower side of alveolar ridge, non-tender, firm in consistency and was approximately 2mm X 2mm in size. [Fig: I] Diagnosis of dental lamina cyst was made. Regular follow-up and observation was advised and mother was reassured about the benign, self-involuting and transient nature of the cyst. After 2 weeks patient was presented for follow up and on examination size had reduced to about half of the original size. [Fig: II].

Fig: I Showing dental lamina cyst oral examination before.

Fig: II Showing dental lamina cyst on oral examination after.

Review of literature

The cystic lesions have been described as white, raised, multiple nodules of maxillary and mandibular alveolar ridges and mid-palatal region varying in size from a pin head to 2 or 3 mm.[6]

In a study conducted by Gerald W. Friend et al on 500 newborns it was found that prevalence of alveolar cysts was approx. 26%.[4]

Whereas in another study done by George D et al. 1038 newborns were examined. Out of that number 143 (13.8%) babies presented with gingival cyst.[5]

In a comparative study done by Donley CL, Nelson LP concluded that Palatal and maxillary alveolar cysts increase with increasing gestational age, post-natal age, and birth weight.[7]

A study conducted by A Flinck et al, oral examination was performed of 1021 newborn children, of whom 101 were re-examined after few months. 74.9% of the children were of oral mucosal cysts of palate or alveolar ridge.[11] Similarly, In our case the anatomical site found was lower alveolar ridge.

Classification

Oral cystic lesions in neonates are classified as of following types:

- Gingival cyst of new born/ Dental lamina cyst of new born
- Epstein pearl
- Bohn's nodule
- Eruption cyst
- Epidermoid and dermoid cyst

According to Shafer's classification of odontogenic cyst, dental lamina cyst is classified by tissue or origin and derived by cell rest of Serres.[8]

Joseph Regezi classified Dental lamina cyst under odontogenic rest types and the origin of rests is epithelial connection between mucosa and enamel organ.[9]

Neville classified dental lamina cyst of new born in odontogenic developmental cyst.[10]

Clinical aspect and management

On clinical examination Dental lamina cysts of new born are single or multiple nodular growths on the crest of alveolar ridges, usually 2-3mm in size. As there is fusion of cyst wall with oral epithelium and discharge of cystic contents usually occurs which describes its transient nature.[12] Diagnosis of dental lamina cyst is usually based on clinical examination, location and characteristic appearance of the lesion.

DISCUSSION

In a comprehensive review by Fromm, of 1,367 newborns, 105 subjects were found to have oral inclusion cysts that were distinct both clinically and histologically.[2] Likewise in our case the oral cyst presented was a dental lamina cyst. The epithelial lining of dental lamina cysts is thin and these are the true cysts and its lumen is normally filled with desquamated keratin, sometimes it may contain inflammatory cells.[1] Common anatomical location of dental lamina cysts is maxilla than in the mandible. Clinically these cysts appear as minute to small nodule or papule found on alveolar ridges. Studies have shown that these cysts are found in groups of 2–6 but may also occur as solitary cysts and in our study we found a solitary cyst.[14] The size may vary from 1 to 3 mm and in our case the size was comparable about (2 mm). As a general notion these cysts arise from the dental lamina. Dental lamina (Epithelial remnants) has the capacity to proliferate, keratinize and form small cysts. Numerous studies have shown (Moskow and Bloom)[13] tendency of proliferation of the dental lamina, with evidence of multiple areas of microcyst formation and keratin production in the foetus with progression of tooth development. These epithelial inclusions usually get atrophied or resorbed after birth. Some of the cysts in gingiva open onto the surface leaving clefts; others are involved by the developing teeth. Giant cells play a role by digesting the debris and keratin of some of the cysts which degenerate and disappear thereby.

CONCLUSION

It is crucial to have knowledge of such frequently found lesions of oral cavity and ability to diagnose such cysts clinically will avoid un-necessary invasive investigations for histopathology. These lesions are transient in nature and occasionally require active treatment. Hence, it is important to reassure the parents about its harmless nature.

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