Case Report

Alveolar cyst of the newborn: a case report

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Abstract Dental lamina cyst or alveolar cyst is a commonly diagnosed developmental anomaly in the mouth of newborns. They are quite often mistaken as natal teeth if present in the lower anterior region. Although the prevalence is high, they are rarely seen because of the transient nature of the lesions. They are self limiting and disappear spontaneously a few weeks or months after birth. Hence no treatment is required for such cases.

Keywords: Alveolar cyst, dental lamina cyst, gingival cyst, newborn

Introduction

Many benign oral mucosal conditions which are developmental in origin and transient in nature are frequently found in newborns. These anomalies are of minor pathological concern because they are typically regarded as normal (Madléna et al., 1992). One such benign oral mucosal condition is the alveolar cyst of the newborn.

According to Alves et al., (2004), Henirich Bohn and Alois Epstein were the first authors to describe the small palatal cysts of the foetuses and newborns in 1800’s. Thus “Epstein’s Pearls” and “Bohn’s nodules” were named after them. Based on the histological origin and location in the oral cavity, Fromm et al. (1967) classified oral mucosal cysts as Epstein’s pearls, Bohn’s nodules, dental lamina cyst or alveolar cyst of the newborn. Epstein’s pearls are keratin filled cysts that occur in mid palatine raphe region near the mucosal surface. They are believed to arise from the trapped embryological epithelial remnants present along the line of fusion of the palatal halves. Bohn’s nodules are also keratin filled cysts but scattered over the palate, most numerous along the junction of the hard and the soft palate and apparently derived from palatal salivary gland structure. Dental lamina cysts are found on the alveolar ridge of the newborn or very young infants representing cysts originating from the remnants of the dental lamina. It is important that the clinician does not mistake these cysts for natal/neonatal teeth or any other pathology in the newborn and render treatment to the patient as these are transient in nature and disappear within two weeks to five months after birth (Flinck et al., 1994).

Case report

A female infant, one month old, was brought to the Department of Pedodontics and Preventive Dentistry by her parents complaining of white swellings which appeared like teeth over the lower gums. History revealed that the swellings were detected a week after birth which were nodular in...
appearance and then reduced to the present size. The child was full term born with no complications during pregnancy or delivery. All the required vaccinations were done soon after birth and her medical history was insignificant.

On intraoral examination, a number of small white papules were seen bilaterally on the alveolar ridge of the mandible in the deciduous second molar region and incisor region (Fig. 1). On examination, the size of the lesion in the anterior region was 6 mm and in the molar region was about 9 mm. They were soft and spongy in consistency on palpation. The cysts got reduced and disappeared without any intervention within 10 days (Fig. 2). No other abnormality was seen in any other parts of the oral cavity. Based on the clinical presentation and characteristic finding, a diagnosis of alveolar cyst of the newborn was made. The patient was kept under observation after proper oral hygiene instructions.

**Discussion**

Alveolar cyst of the newborn otherwise called gingival cyst or dental lamina cyst is believed to arise from epithelial remnants derived from the dental lamina. During the bell stage of the tooth development, the dental lamina disintegrates into discrete islands of epithelial cells. Usually these clusters degenerate and resorb. Sometimes, they persist as epithelial pearls or islands within the jaw as well as in the gingival (Fromm et al., 1967). They are termed as the ‘rests of Serres’. These remnants proliferate to form small keratinised cysts (Kumar et al., 2008).

The reported prevalence of the alveolar cyst in newborn is about 25-53% (Friend et al., 1990, Jorgenson et al., 1982). Paula et al (2006) reported a prevalence of 28%. According to Flinck et al (1994), palatal cysts are formed during the foetal period and majority of them disappear soon after delivery. But the alveolar cysts are likely to appear during the neonatal period. In the present case, only alveolar cysts were noticed in the infant.

In the study reported by Donley and Nelson (2000), the cysts were more commonly seen in the maxillary arch than in the mandibular arch and whenever they existed in mandible, they also appeared in the maxilla. In the maxilla, the most affected region was the labial aspect of the anterior
region and in deciduous second molar region. In contrast to the report by Donley and Nelson (2000), the cyst in the present case appeared in the mandibular arch only. They appear as small, 1-3 mm sized white or yellow white papules and can be seen in clusters of 2-6, sometimes even singly. They are mostly asymptomatic. Microscopic evaluation may reveal a cystic lumen filled with desquamated keratin and lined by stratified squamous epithelium occasionally with inflammatory cells in the connective tissue. Sometimes these “true cysts” demonstrate a communication with the mucosal surface (Donley and Nelson, 2000). In the present case, isolated, asymptomatic cysts which were white in colour were noticed.

Most authors do not recommend any treatment since the lesions are asymptomatic and disappear spontaneously by fusing with the oral epithelium and discharging its contents into the oral cavity during the neonatal period (Cataldo and Berkman, 1968). No treatment was rendered to the child except for the reassurance provided to the parents to alleviate their anxiety. The child had been periodically observed and is still under observation. The disappearance of the cyst within 2 weeks in the present case coincided with the findings of Cataldo and Berkman (1968) and supported the diagnosis.

References


