Congenital epulis: A rare case report

Jaya Naidu, Shreya Banerjee, Sapna Jyoti, Pavanalakshmi GP, Kirthana Satish

ABSTRACT

Introduction: Congenital epulis, also known as congenital granular cell tumor, is a rare benign intraoral tumor which occurs along the gingiva of alveolar ridges of the jaws. It has a female predilection with a female and male ratio of 8:1. It usually occurs as a single mass, however, multiple epulis have also been reported. It has the potential to interfere with feeding and cause airway obstruction.

Case Report: A two-year-old girl presented with the chief complaint of swelling in upper left back tooth region. The parent also reported bleeding from the swelling while brushing. The mass was soft in consistency with an irregular surface, approximately 3x2 cm in size, and caused vestibular obliteration. The parents reported that the mass had slowly increased in size from when they had first noticed it, nine months back. Based on the clinical appearance a provisional diagnosis of peripheral giant cell granuloma was given. Complete surgical excision of the mass under general anesthesia was performed and the specimen was sent for histopathology.

Conclusion: Pedodontists may be consulted initially regarding such cases and should be aware of the potential for complications like feeding difficulties and airway compromise.
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Keywords: Congenital epulis, Congenital granular cell lesion, Intraoral tumor, Neumann’s tumor

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INTRODUCTION

Congenital epulis is a rare benign intra-oral tumor, which mostly occurs along the gingiva of the alveolar ridges of the newborn. Also known as Neumann’s tumor (Newman, 1871), it has varingly been referred to as congenital gingival granular cell tumor (CGCT) of the
newborn, congenital granular cell lesion (CGCL) [1–3] and congenital myoblastoma (historically) [3]. Though numerous theories, which varyingly consider these lesions as embryonal hamartomas, or of fibroblastic, histiocytic, myogenic and neurogenic origin, have been postulated, the etiology and histogenesis of these lesions remains unclear [1, 3, 4]. Ultrastructural studies strongly support a mesenchymal histogenesis [1, 4], while a hormonal factor cannot be discounted considering the marked female predilection of the lesion [1, 5]. Although mostly occurring as single entities, multiple epulis have also been reported [1–3]. The maxilla is more commonly affected with a ratio of 2:1 [1–3]. Usually occurring as a nodular, sessile or pedunculated mass with a smooth, normal colored surface, that appears to arise from the alveolar ridge or process, it varies considerably in size from only a few millimeters in diameter to several centimeters [1–6]. Females show a greater predilection with a ratio of 8:1 [1, 3, 7, 8]. It has the potential to interfere with feeding, cause airway obstruction [1–3] and prevent adequate closure of the mouth [7]. No recurrence or metastasis has been reported in literature [1–3], while spontaneous regression of the lesion has been known to occur [5, 6]. It has been incurred that cases where the lesion has been reported to seemingly increase in size, inflammation and edema as a result of traumatic factors could be responsible [5]. The management of congenital epulis may involve conservative surgical excision if feeding or respiratory problems exist [1–3].

To date relatively few cases of congenital epulis have been reported. This case report describes the clinical features and management of an atypical case.

**CASE REPORT**

A two-year-old girl presented with a swelling in upper left back tooth region. The swelling was noticed by the child’s parent, nine months before, and was observed to be slowly increasing in size. A history of bleeding on brushing and a slight discomfort on mastication were also reported. The patient’s medical, dental and family histories were non-contributive. Extraoral examination revealed a slight left sided facial asymmetry. All deciduous teeth were present on intraoral inspection. A swelling in the maxillary left posterior segment, which appeared to be growing from the alveolar ridge, was observed. The swelling extended from the distal aspect of first primary molar to the first permanent molar region and from one centimeter above the gingival margin to the level of the occlusal plane and 0.5 cm palatally. Vestibular obliteration was present. The lesion was erythematous, with an irregular surface. On palpation, it was soft in consistency and appeared to be pedunculated (Figure 1).

Three-dimensional reconstructed computed tomography scan revealed a bilateral asymmetry along with displacement of the first permanent molar (Figure 2). Based on the clinical examination, a differential diagnosis of fibroma or peripheral giant cell granuloma was made.

Patient was referred to the Department of Oral and Maxillofacial surgery for complete surgical excision of the mass under general anesthesia. Complete excision of the lesion along with the removal of second primary molar and displaced first permanent molar was carried out (Figure 3). Post excision, the specimen was sent for histopathology (Figure 4). Intraoperative course and postoperative recovery of the patient was uneventful. The patient was prescribed perioperative antibiotics and postoperative analgesics. Oral feedings were commenced postoperatively and the patient was discharged from the hospital after four days of admission. Regular follow-up and review was advised.

Hematoxylin and eosin stained sections showed homogenized collagen fibers along with sheets of cells with granular cytoplasm and basophilic nuclei with prominent nucleoli. Plenty of blood vessels including capillaries,
venules and arterioles with RBC’s could be appreciated in the stroma. Hemorrhagic areas along with inflammatory cell infiltrate consisting of lymphocytes, neutrophils and plasma cell and dilated capillaries were also observed (Figure 5). Based on these findings, a histopathological diagnosis of congenital epulis was established.

**DISCUSSION**

Congenital epulis is usually diagnosed at birth and if the lesion is large, it may be diagnosed in utero by 3D ultrasound and MRI scan [5, 6]. In this case, the diagnosis was delayed as the tumor went unnoticed due to its small size. It usually presents as a pedunculated mass with a smooth surface and normal color. In the present case, it was atypical with an erythematous and irregular surface. Seen mainly in the alveolar maxillary process, lateral to the midline in the canine and lateral incisor region [3], it was observed in the maxillary posterior region in the present case. The treatment of choice for congenital epulis is surgical excision, if the lesion is interfering with feeding. If there is no interference with feeding, regular monitoring of the lesion has been advocated as case reports on spontaneous regression have been documented [5, 6]. As the lesion interfered with feeding in the present case, it was excised to minimize further complications.

Although additional congenital or underlying bony defects or dental anomalies are not usually present [3], in the present case an underlying bony defect was encountered along with displacement of the maxillary first permanent molar.

It is essential for pedodontists and pediatricians to familiarize themselves with the clinical differential diagnosis of growths in the oral cavities of newborns as the treatment modalities may vary. The differential diagnosis for congenital epulis includes granular cell tumor, fibroma, granuloma, rhabdomyosarcoma, chondrogenic and osteogenic sarcomas, hemangiomas and lymphangiomas [6, 7].

**CONCLUSION**

Pedodontists and pediatricians can be consulted initially in such cases, necessitating the need for awareness regarding the clinical features, differential diagnosis, treatment and management of congenital epulis. An atypical case of congenital epulis such as the one being reported also demonstrates that it is essential to keep in mind the clinical, radiographic and histological characteristics of the lesion and not just the epidemiological characteristics to establish the correct diagnosis.
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