Spontaneous Regression of Congenital Epulis in Infancy- A case report

Abstract:
Congenital epulis, a benign tumour of the oral cavity, referred to as Neumann's tumour, is a very uncommon disease among newborns. The maxillary alveolar ridge is where it often comes from in the alveolar ridge. Although the lesion has a stunning appearance, it is ultimately benign. It might result in mechanical obstruction, which would make breathing difficult and make feeding challenging. At the moment of birth, solving the issue can require a multidisciplinary team approach. This paper's goal is to describe instance of congenital epulis that were present at birth, case was conservatively managed without any surgical intervention leading to spontaneous regression.

Key-words: Congenital Epulis, Neumann's tumour, Infant, Tumour.

Introduction:

Congenital epulis, also known as congenital gingival granular cell tumour (CGGCT), is a rare benign growth that predominantly affects infants. This condition was first described by Neumann in 1871, leading to its alternative name, Neumann's Tumour [1]. The term "epulis" originates from the Greek word that translates to "to boil the gums" or "on the gums," accurately reflecting the location of this gingival lesion.

The condition shows a significant predilection for females, with a female-to-male ratio of 10:1. Additionally, it is observed to occur three times more frequently in the maxilla compared to the mandible[2]. Although congenital epulis shares certain histological characteristics with adult-onset granular cell tumours, they are distinct entities with unique histogenesis.

This case report aims to raise awareness about this uncommon condition and advocate for its conservative management. Given its benign nature and the potential risks associated with surgical intervention in neonates, a conservative approach can often be a preferable and effective strategy for managing congenital epulis.

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Case Report:

A healthy 2-day-old full-term female infant (Fig 1) was presented to the Department of Pedodontics and Preventive Dentistry at Teerthanker Mahaveer Dental College and Research Centre with the primary complaint of a mass observed on both the upper and lower gums. The infant was delivered without complications at full term, and there were no notable medical histories from either the maternal or paternal sides.

Upon neonatal clinical examination, a distinct pink, bilobed, pedunculated mass with a smooth surface was identified. The mass was non-haemorrhagic, measured 1.5 x 1 x 1.5 cm, and had a firm consistency(Fig 2). It was located on both the upper

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and lower alveolar ridges of the infant's mouth. Palpation of the mass revealed no signs of pain, discomfort, or lymphadenopathy.

The presence of the mass was observed to interfere with the normal closure of the infant's mouth and also affected breastfeeding. However, it did not pose an immediate threat to the airway. All laboratory tests, systemic evaluations, and general physical examinations conducted on the infant returned normal results. Based on these findings, a provisional diagnosis of congenital epulis was established.

A "wait and watch" approach was adopted in this case. After several months of follow-up (refer to figures 3 and 4), the lesions had subsided without the need for surgical intervention, indicating spontaneous regression.The primary dentition is erupting in the mandibular arch without any complications.

Our patient presented with a relatively small lesion on the maxillary alveolar process, which was not causing any problems with respiration. With radiographic and urinary investigations, we ruled out neuroectodermal tumor of infancy. Parental compliance was excellent for all follow-up appointments. This case demonstrates the ability of the CE of the new born to spontaneously regress.

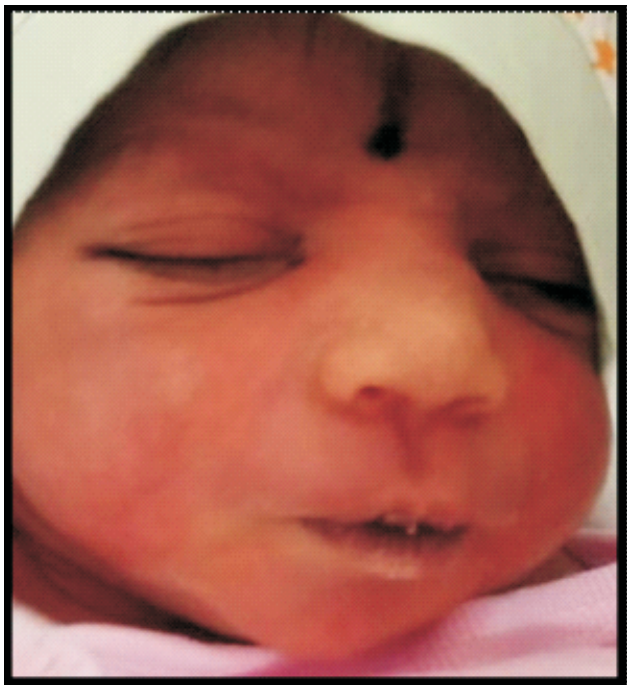

Fig 1:Two-day-old full-term female infant

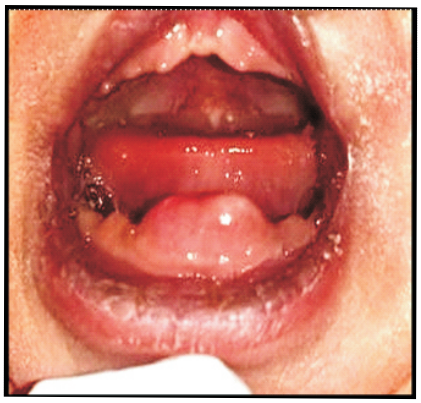

Fig 2: Bilobed, pedunculated,non-tender smooth surfaced mass arising on the upper and lower alveolar ridges

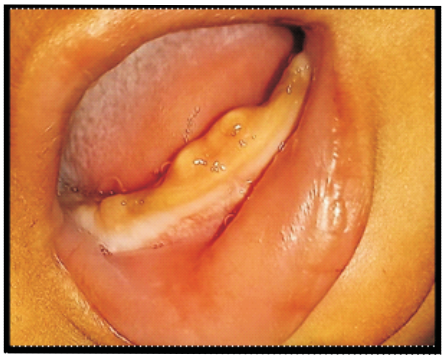

Fig 3: 3 month follow up image with reduced masses

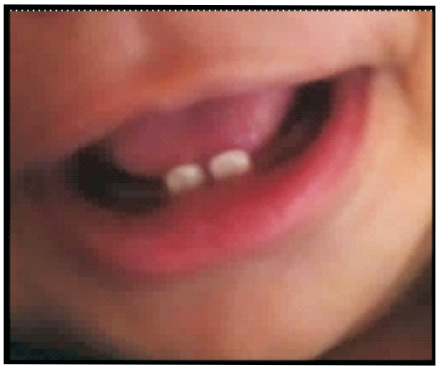

Fig 4: 7 month follow up image with eruption of mandibular central incisors

Discussion:

Granular cell epulis is the preferred and widely accepted term for a rare benign tumor in neonates, which is distinct from other types of granular cell tumors. This bulge originates from the alveolar ridge, specifically beginning in the maxillary

alveolar ridge, and it more commonly affects women than men. There are no signs of malignancy or recurrence associated with this tumor. While multiple or lobulated tumors are uncommon, typically the tumor presents as a single mass. The size of the mass may potentially affect oral nutrition or respiration[3].

Strong options for the histological origin of congenital granular cell epulis include Schwann cells, fibroblasts, or mesenchymal cells (CGCE), while the histogenesis of the condition has historically been unknown. Also strengthening the notion of an odontogenic genesis for CGCE is Childers et al who reported that 20% of cases had odontogenic epithelial remains[4].

Clinically, rhabdomyoma, infantile myofibroma, melanotic neuroectodermal tumour of infancy, peripheral odontogenic fibroma, and neurofibroma are among the most frequent additional diagnoses for CGCE[5,6].

The precise cause of Congenital Epulis (CGTs) is still not fully understood, despite several theories aiming to clarify its origins. CGTs are believed to stem from Schwann Cells, leading to a notable reactivity to S-100 protein. Various theories suggest different sources for Congenital Epulis, such as myoblastic, neurogenic, odontogenic, fibroblastic, and histocytic origins. Moreover, the occurrence of Congenital Epulis exclusively in female newborns has sparked the theory of a hormonal developmental mechanism[7].

Although rare, spontaneous regression post-birth has been reported in the literature, making conservative treatment sometimes necessary. Surgical intervention is required if the lesion obstructs breathing or feeding[8]. To reassure anxious parents, a prompt, conservative surgical resection at the tumor base should be conducted. Excision with a broad margin is not recommended. No instances of local recurrence have been reported after incomplete excision. In the current case report, a watchful waiting approach was adopted, as not all cases require surgical intervention, and there was no recurrence of the lesion after it subsided. This treatment strategy contradicts the recommendation of Gupta et al[9]., who do not advocate for "watchful waiting" as they consider spontaneous regression to be very uncommon.

Conclusion:

Granular cell epulis is a rare soft-tissue tumor that manifests in the oral cavity. Clinical examinations can typically identify congenital epulis. Depending on its size, intervention may be required if it obstructs breathing or eating; however, if not, a watchful waiting approach can be employed. Parents should be informed and encouraged about this approach. Generally, granular cell epulis has a positive prognosis. Adopting a conservative management strategy is beneficial as it avoids subjecting a newborn to general anesthesia for a benign and non-recurrent lesion. Clinical judgment should be used to decide which cases of CE should be monitored for natural regression and which should be considered for surgical excision.

References:

1. Neumann E. Ein fall von kongenitaler Epulis. Arch Heilkd. 1871; 12:189-190.
2. Tatli U, Abayli C, Kisa HI, Uguz HA. Congenital granular cell epulis: A case report of an unexpected feature with histopathological and immunohistochemical examination. J Cranio Maxillary Dis. 2014; 3:51-55.
3. Lapid O, Shaco-Levy R, Krieger Y, Kachko L, Sagi A. Congenital epulis. Pediatrics. 2001.
4. Childres ELB, Fanburg-Smith JC. Congenital epulis of the newborn: 10 new cases of a rare oral tumor. *Ann Diagn Pathol.* 2011; 15:157–161.
5. Conrad R, Perez MC. Congenital granular cell epulis. *Arch Pathol Lab Med.* 2014; 138:128–131.
6. Bianchi PR, de Araujo VC, Ribeiro JW,et al. Multiple congenital granular cell epulis: case report and immunohistochemical profile with emphasis on vascularization. *Case Rep Dent.* 2015;2015.
7. Ritwik P, Brannon RB, Musselman RJ. Spontaneous regression of congenital epulis: a case report and review of the literature. J Med Case Rep.2010; 4:331.
8. Küpers AM, Andriessen P, van Kempen MJ,*et al*. Congenital epulis of the jaw: A series of five cases and review of literature. Pediatr Surg Int. 2009;25:207-210.
9. Gupta D,Panda SS, Yadav DK,Kumar B,Bagga D,et al. Congenital epulis: A rare lesion. J Clin Neonatol. 2014; 3:220-222.