CONGENITAL GRANULAR CELL EPULIS (CGCE) IN A FEMALE NEWBORN – CASE REPORT

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ABSTRACT

Congenital granular cell epulis (CGCE) is an exceptionally rare benign soft tissue tumor of the neonatal oral cavity, that usually originates from the neonatal gingiva and can lead to difficulty in breathing and feeding upon birth. It has predominance for females with an 8:1 ratio in relation to males and is exclusively encountered in the oral cavity.

We present a case of a full-term female neonate, born after a regularly monitored, uncomplicated pregnancy, in whom multiple papillomatous growths were identified in the oral cavity within the first hours of life. A larger papillomatous lesion measuring 2 cm was noted on the tongue, accompanied by several smaller nodules measuring 0.4–0.6 cm nearby, as well as an additional lesion on the mandibular alveolar ridge. The neonate was under medical supervision and exhibited no significant respiratory or feeding difficulties.

Complete surgical excision was the treatment of choice and was performed under general anesthesia on the second day of life. The postoperative course was uneventful, with stable vital signs maintained throughout. Histopathological and immunohistochemical analyses confirmed the diagnosis of CGCE.

Postoperatively, the infant was regularly followed by the neonatologist, with no recurrence of the lesions observed, satisfactory healing, and normal growth and development.

This case highlights the unusual multifocal presentation of CGCE, including involvement of both the tongue and mandible, and emphasizes the importance of prompt recognition, surgical intervention, and histopathological confirmation to ensure optimal neonatal outcomes.

Keywords: Newborn, Multifocal oral mass, congenital granular cell epulis, multidisciplinary management.

INTRODUCTION

Congenital granular cell epulis is a unique and rare benign lesion that occurs in the alveolar ridge mucosa of the jaw of the newborn. An example of neonatal oral disease is the congenital granular cell lesion (CGCL), it is also known as congenital epulis. This is a gingival congenital benign rare tumor whose evolution ceases after birth (1). Therefore, it occurs exclusively in newborns babies (2). The etiopathogenesis of congenital epulis remains incompletely elucidated, although the condition demonstrates a marked predilection for female neonates, femele : male ratio is 8:1. The lesion exhibits considerable variability in size and may present as either a solitary or multiple nodular mass arising from the alveolar ridge. It

presents as a submucosal mass of varying size, usually single [3] but multiple cases have also been reported [4] .

In most cases, congenital epulis is asymptomatic and therefore may not be detected until birth. Prenatal diagnosis is uncommon and mostly confined to the third trimester. Multifocal lesions or occurrences in atypical intraoral locations–such as the tongue, as shown in our case , are exceedingly uncommon and contribute to the clinical diversity of this entity. Nevertheless, when the lesion attains substantial dimensions, it can contribute to clinically significant complications, including difficulties with feeding and, less commonly, respiratory compromise.

Given its rarity, distinctive clinical behavior, and the potential for diagnostic confusion with other neonatal oral masses, CGCE represents a condition of significant clinical interest. Early recognition and appropriate management are essential to prevent functional complications and to ensure optimal neonatal outcomes.

This report describes a rare case of multifocal CGCE affecting the tongue and lower jaw in a full-term female newborn. The unusual location and multiple lesions, along with a smooth recovery after surgery, underscore the importance of reporting such cases.

CASE PRESENTATION

The patient was a full-term female neonate, born after a regularly monitored pregnancy with no reported complications, infection screening swabs during pregnancy were negative. The perinatal and postnatal course was unremarkable. The infant had a birth weight of 3250 g and Apgar scores of 9/9/10 at 1α, 5α, 10, respectively.

Upon initial oral examination, papillomatous growths were identified on the tongue, comprising one larger lesion measuring 2 cm in diameter and several smaller nodules ranging from 0.4 to 0.6 cm surrounding it. In addition, a smaller lesion was noted on the mandibular alveolar ridge.

A cranial ultrasound (CNS echography) performed shortly after birth was within normal limits for age, and no other congenital anomalies were detected.

Given the potential for functional interference and the benign clinical appearance, complete surgical excision under general anesthesia was performed on the second day of life. The procedure was uneventful, and normal feeding was established immediately postoperatively.

Histopathological and immunohistochemical analyses of the excised lesions confirmed the diagnosis of congenital granular cell epulis (CGCE). Postoperative follow-up at 6 days and 6 months demonstrated complete healing without recurrence, and the neonate remained in excellent overall health.

DISCUSSION

Congenital granular cell epulis (CGCE) is a very rare benign tumor of the neonatal oral cavity, with fewer than 250 cases reported in the literature. The anxiety of the family because of the appearance of the lesion makes the physician who is responsible for the diagnosis and treatment of these disorders have a major role in the proper management of these cases .(5). It occurs almost exclusively in females and typically appears as a solitary lesion on the maxillary alveolar ridge.

The present case is unusual because of the multifocal presentation, with a large lesion on the tongue, smaller nodules around it, and an additional lesion on the mandible. Such atypical locations and multiple lesions are exceptionally rare. Interestingly, despite the size and number of lesions, the neonate had no feeding or breathing difficulties, which is not always the case in larger CGCE.

Most cases are diagnosed after birth, but a few reports have shown that CGCE can be detected prenatally by ultrasound or MRI, usually in the third trimester. Early detection could help plan delivery and prepare the neonatal care team, especially if lesions are large or could interfere with feeding or respiration. However, small lesions often remain undetected before birth.

Surgical excision is the treatment of choice and is usually curative, with recurrence being extremely rare. Histopathology and immunohistochemistry confirm the diagnosis and help differentiate CGCE from other oral masses. Histopathologically, CGCE is characterized by large polygonal granular cells with eosinophilic cytoplasm and small, uniform nuclei, typically negative for S-100 protein, distinguishing it from granular cell tumors seen in older children and adults. Immunohistochemical confirmation is essential in atypical or multifocal cases to establish the diagnosis and exclude other entities such as oral teratomas, neuroectodermal tumors, or hemangiomas.

This case highlights the importance of careful postnatal oral examination, awareness of rare multifocal presentations, and consideration of the potential for prenatal detection in selected cases.

CONLUSION

Congenital granular cell epulis (CGCE) is an uncommon tumor seen only in the newborn. (6) It usually tends to grow on anterior alveolar ridge of the newborns, more on the maxilla than on the mandible(7). This case demonstrates an unusual multifocal distribution, involving both the tongue and the mandible, highlighting the broad clinical variability of CGCE.

Early prenatal recognition of CGCE is of critical importance. Prenatal imaging using ultrasound or MRI can identify large or multifocal lesions, allowing for timely planning of delivery and preparation for potential airway management. Early detection also facilitates multidisciplinary coordination to ensure optimal neonatal care. The neonatal disease may be perceived before birth, on examination of prenatal care, such as ultrasound [8] .Although most cases are traditionally diagnosed postnatally, the integration of prenatal screening can significantly improve perinatal outcomes. Recognizing atypical or extensive oral lesions before birth enables clinicians to anticipate challenges, reduce complications, and provide targeted interventions immediately after delivery.

Early diagnosis and surgical treatment of CGCE are essential to avoid functional impairment. The prognosis is excellent following complete excision (9). For multiple CGCTs, simple surgery has been adopted (10). This report highlights the importance of being aware of atypical presentations of CGCE, conducting thorough oral examinations of newborns, and proactively using prenatal imaging in suspected cases.

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