

# Congenital epulis of newborn: Report of a spontaneous regression case

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*Congenital epulis of newborn is a rare benign tumor that is also known as a congenital granular cell tumor. The objective of this article was to describe and discuss the case of a newborn girl with a pedunculated mass in the left anterior maxillary alveolar margin diagnosed as congenital epulis. Conservative treatment was adopted and the lesion spontaneously regressed.*

**Keywords:** epulis; granular cell tumor; newborn  
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## INTRODUCTION

Congenital epulis of newborn (CEN) is a rare benign tumor that is also known as a congenital gingival granular cell tumor. The terminology most universally used is congenital epulis of newborn.<sup>1</sup>

Clinically CEN presents as a smooth or lobulated mass, which can vary in size from a few millimeters up to nine centimeters in diameter.<sup>2-6</sup> The lesion is pedunculated and the tumor base is the alveolar mucosa.<sup>7</sup>

CEN occurs three or four times more often in the maxillary bone than the mandible,<sup>3,8,9</sup> usually in the region corresponding to the incisors and canines.<sup>1,2,10</sup> Moreover, it affects girls eight to ten times more often than boys.<sup>3,6,8,10</sup> It generally appears as a solitary nodule, but multiple nodules occur in 10% of cases.<sup>1</sup>

CEN histogenesis remains undefined, but several possible

tissues of origin have been suggested: odontogenic, fibroblastic, histiocytic, myoblastic, myogenic, and neurogenic.<sup>9,10</sup>

The tumor is surrounded by a stratified squamous mucosa and a prominent branching fibrovascular network is noted throughout the tumor.<sup>11</sup> CEN is histologically similar to granular cell myoblastoma, though it does not present pseudoepitheliomatous hyperplasia. The tumor is formed by cells with granular and eosinophilic cytoplasm and a vascular component that is more prominent than in myoblastoma.<sup>12</sup>

The lesion stops growing after birth and spontaneous involution of the tumor occurs in some cases.<sup>7,12-14</sup> However, it can cause respiratory and breast-feeding problems when it presents a larger size.<sup>3</sup>

Treatment of CEN consists of surgical removal when respiratory and breast-feeding difficulties occur.<sup>4,15</sup> Recurrence or metastasis does not occur with this lesion, even when removal is partial.<sup>1,4,6,11</sup>

The purpose of this work is to report a case of a newborn who presented a pedunculated lesion on the maxillary alveolar mucosa clinically diagnosed as congenital epulis of newborn.

## CASE REPORT

A newborn girl was referred to the Pediatric Dentistry Clinic at School of Dentistry, Lutheran University of Brazil – ULBRA, because of the presence of a pedunculated lesion in the region corresponding to the primary maxillary left lateral incisor. The lesion presented fibrous consistency and measured approximately 1.0 x 0.6 cm. Its clinical aspect suggested congenital epulis of newborn (Figure 1).

At birth the child weighed 3.155 kg and measured 49.5 cm. She was born without complications by cesarean section at a gestational age of 40 weeks. The lesion did not cause any respiratory or breast-feeding problems. Because of the child's age, the size of the lesion and absence of any complications, we decided to follow the case. Surgery or biopsy

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**Figure 1.** Pedunculated lesion in the region corresponding to the primary maxillary left lateral incisor.

were ruled out if lesion would not progress.

During the follow-up the patient presented normal growth and development. Monthly the child was examined and the lesion photographed to assess the evolution of the case. During the appointments the tumor regressed in size. Complete regression was observed at 12-months of age and primary teeth erupted normally on the alveolar mucosa (Figures 2 and 3).

**DISCUSSION**

The lesion known as congenital epulis is a rare benign tumor of the newborn. Because of its rarity and unknown etiology, this tumor advocates for new scrutiny in the field of oral pathology. This article reports a typical case of a congenital epulis, i.e. a solitary pedunculated lesion in the anterior maxillary region of a female newborn.<sup>1,3,6,8,10,14</sup>

CEN presents a typical macroscopic appearance and then few other differential diagnoses are considered. The most common oral lesions of the newborn are Epstein pearls and Bohn nodules. Others components in the differential diagnosis of pedunculated anterior oral lesions in the newborn could include hemangioma, lymphangioma, fibroma,

lipoma, granuloma, rhabdomyosarcoma, and osteogenic and chondrogenic sarcomas. The treatment of these lesions can be different and in some cases biopsy and surgical removal can be granted. Some of these lesions grow with time and can involve the alveolar bone. CEN is an isolated lesion of the soft tissue and does not involve the alveolar bone.<sup>2,3,6,11</sup>

Based on the literature, the differential diagnosis of CEN can be mainly mistaken with granular cell myoblastoma.<sup>2,3,7,11</sup> In contrast to CEN, granular cell myoblastoma can occur anywhere on the skin or mucosa at any age. This lesion is rarely congenital and recurrence can occur when not completely removed.<sup>2</sup> In addition, congenital epulis is normally pedunculated, presenting a smooth surface and occurs on crest alveolar edge at birth.<sup>3</sup>

Thus, clinical diagnosis of CEN is suggested when a “gum tumor” is present at birth. Diagnosis is confirmed by histological exam. However, this involves surgical intervention, presenting the risk of hemorrhage in the newborn. Moreover, the procedure does not permit a conservative approach which could be indicated in small lesions of CEN.<sup>5,13,14</sup>

It should be emphasized that surgical intervention could pose a risk to the primary tooth germ, since minimal alveolar bone tissue covers the tooth bud. Hypoplasia to the sub-jacent teeth can occur after CEN removal.<sup>16</sup>

In this case a nonsurgical intervention approach was adopted, based on the reports of the literature where spontaneous involution of the lesion occurred up to 12 months after birth.<sup>13,14</sup> The child presented normal development at birth with no respiratory or breast-feeding problems. Treatment of CEN consists of surgical removal when these problems are observed.<sup>4,15</sup> Recurrence or metastasis does not occur with this lesion, even when removal is partial.<sup>1,4,6,11</sup>

Based on the literature and on this case, it can be concluded that a conservative approach of the congenital epulis of newborn should be adopted if the lesion is small. This approach anticipated its spontaneous regression and normal eruption of primary teeth.



**Figure 2.** Congenital epulis follow-up at 7 months-old.



**Figure 3.** Reduction of the lesion at 10 months-old and partial eruption of the primary maxillary left lateral incisor.

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