Congenital Epulis: About Four Cases in Newborns
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Abstract
Congenital epulis or Congenital granular cell epulis (CGCE) is a rare benign tumour in the neonate. It arises from the gingival mucosa. The most affected oral site is located around the canine/incisor region of the maxillary alveolar ridge. This benign condition can be life threatening when it is obstructive. It has predominance for females. CGCE’s histogenesis remains obscure and controversial. We report 4 cases of newborns females and one male with features of obstructive congenital epulis arising from both maxillary and mandibular alveolar ridge, interfering with breastfeeding. Diagnosis was suspected clinically and confirmed by histology and immunohistochemical. Outcome was good after prompt surgery for the 3 cases. 2 of patient showed satisfactory postoperative healing and excellent health at both the 10-day recall appointment follow-up but one of them was lost to follow up.

Keywords: Epulis, newborn, tumor, congenital.

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INTRODUCTION
Congenital granular cell epulis (CGCE) or congenital gingival cell tumour is a rare congenital tumor found in newborns. Less than 250 cases are reported to date. First time described by the pathologist Dr. Neumann in 1871 who presented it as a « congenital epulis » [1]. It is a benign tumor which arises from the gingival mucosa. Epulis is a word derived from the ancient Greek language and translates into « swelling on the gingiva ». It has predominance for females with an 8:1 ratio in relation to males and is exclusively encountered in the oral cavity.

The most affected oral site is located around the canine/incisor region of the maxillary alveolar ridge, where the lesion arises as a solitary pedunculated mass. CGCE’s histogenesis remains obscure and controversial [2]. The vital prognosis can be at stake in the case of an obstructive tumor. Surgical treatment should be prompt in the presence of obstructive symptoms that interfere with breathing or eating, or in the event of haemorrhage.

We present 4 cases of newborns 3 females and 1 male which diagnosis was suspected clinically and confirmed by histology.

CASE REPORTS

Case 1
The first case was a 7-day-old female born at time, who not experience any difficulty regarding breathing or deglutition. The tumor was located into the maxillar oral ridge, multilobee measuring 3 cm of long axis, pink color with a smooth and painless surface with no prominent blood vessels. The tumor interfered with feeding, and closing the mouth (Figure-1). Complete surgical excision was the treatment of choice in this case, and the procedure was performed under both general anesthesia. The post-operative course was uncomplicated. The patient presents an excellent health at the 2 years recall appointment with any aesthetic anomaly with good closure of the mouth (Figure-2). The diagnosis of CGCE was confirmed histology.

Fig-1: Congenital epulis from the maxillar gengiva
Case 2

It about a 10 days old male born at time by an uncomplicated pregnancy. One pedunculed mass bilobeted measuring 2 cm located in the mandibular alveolar ridge was detected clinically at birth without any difficulty regarding breathing (Figure 3). The tumor was removed under general anaesthesia (Figure 4). There wasn’t any complication in the post-operative course. The patient showed satisfactory postoperative healing. No recurrence has been noticed on postoperative visits and perfect reconstitution of the maxillary alveolar ridge has occurred without no obstacle to dentition.

Case 3

The third case, a 5 days old female born at time by caesarean. The suspicion of congenital epulis was done in delivery room. The tumor was located in the left side of mandibular alveolar without any interference with breathing or feeding (Figure 5). Complete surgical excision was the treatment of choice, and the procedure was performed under both general anaesthesia without any complication. The patient was lost to follow up but the histology confirms the diagnosis of CGGE.

Microscopic examination demonstrated a tumor measuring 7mm composed of round or ovoid cells with abundant granular eosinophilic cytoplasm and small eccentric displaced nuclei. The tumor cells were separated by a fine vascular network.

Case 4

The last case is a recent case about a 7 days old female born at time without any complication. The diagnosis of congenital epulis was made at birth. The tumor was located in the maxillar oral ridge, with 2.5 cm of long axis, interfering with feeding (Figure 6). The complete surgical excision was done under general anaesthesia without any complication (Figure 7). The histology confirms the diagnosis of CGGE.
**DISCUSSION**

This benign lesion, CGCE, predominantly affects female infants with an 8:1 ratio in relation to male infants and is encountered 3 times more often on the maxilla than on the mandible [6].

Clinically, majority of cases appears around the canine/incisor region of the maxillary alveolar ridge as a solitary pedunculated. The exact pathogenesis of this benign tumor is still unclear and several theories have been put forward: myoblastic, neurogenic, odontogenic, fibroblastic or endocrine [8]. A study in rats found a correlation between tumor appearance and oestrogen exposure in utero. [9] Owing to this fact and the correlation to female newborn predominance, it is believed that maternal hormones stimulate tumor growth. Paradoxically, no oestrogen or progesterone receptors have been detected in CGCE cells [10]. Nevertheless, multiple lesions or multiple localizations have been described in 5 to 16% of cases [11]. The tumor is most often unique, firm, of fairly regular surface, sometimes polylobated, sessile or pedicle, pink or red in color, not painful on palpation [8-12].

The size of the tumor varies from a few millimetres to ten centimetres in its largest diameter. The classic clinical appearance of the mass often allows the diagnosis to be suspected. In the foetus, large lesions can hinder swallowing with the formation of a hydramnios, sometimes acute, which leads to the diagnosis of the tumor [1, 4, 11]. The risk of bleeding from these large lesions (for example tearing of the pedicle) can justify delivery by caesarean [1].

**CONCLUSION**

Congenital epulis or Congenital granular cell epulis (CGCE) is a rare benign tumour in the neonate. It arises from the gingival mucosa. This benign condition can be life threatening when it is obstructive. It has predominance for females. Diagnosis was suspected clinically and confirmed by histology and immunohistochemical. The treatment is a complete surgical excision. Histology confirms diagnosis by showing tumor formed of large round or polygonal cells centered by round or oval nuclei, with a granular cytoplasm and a tumor stroma.

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**REFERENCES**


