Multiple congenital epulis of the newborn: A case report and literature review

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**A B S T R A C T**

Congenital epulis of newborn is a very rare benign tumor of the oral cavity. These tumors may cause airway obstruction and interfere oral feeding. Antenatal ultrasonography and perinatal MR imaging make the treatment more predictable. And multidisciplinary team approach is a sine qua non of proper management. Herein, we report a case of multiple congenital epulis of the newborn, which interferes oral feeding and mouth closure. And through literature review, we suggest a guideline to manage congenital epulis.

1. Case report

A female infant was born at 37 weeks of gestation by vaginal delivery, and the baby at birth weighed 2970 g with a fetal facial mass detected on routine prenatal ultrasonography. The prenatal ultrasonography revealed a 1.5 cm, well-demarcated, hypo-echoic mass in the oral cavity. Clinical examination of the newborn confirmed one pink, pedunculated, smooth surfaced mass with a firm consistency shown to be attached to the alveolar ridge of the mandible, and two other similar small tumors on the alveolar ridge of the maxilla (Fig. 1). At age of 8-day, due to difficulty in oral-feeding, mouth closure and respiration, the lesions were excised under general anesthesia. The surgery was performed by scalpel and electrocauterized without any difficulty. Pedunculated mass caused little bleeding and wound closure was not needed. Breast-feeding was allowed on the same day and the post-operative course was uneventful. Histologic examination confirmed the lesion to be consistent with a congenital granular cell tumor (Fig. 2A and B). Immunochemically, S-100 protein, CD68 was negative. At 6 month of follow-up, there were no signs of recurrence.

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**Fig. 1.** Clinical examination of the newborn: 1, pedunculated soft round mass was shown to be attached to the alveolar ridge of the mandible, and 2, other similar small tumors were observed on the alveolar ridge of the maxilla.
2. Discussion

Congenital epulis or gingival granular cell tumor is a rare neonatal benign tumor, which is first described by Neumann in 1871. Although the etiology of congenital epulis is unclear, it is thought to be a hormone related, non-neoplastic, degenerative, or reactive lesion [3,4]. It is an isolated entity and not associated with any syndrome [5]. The majority of cases are observed in newborn girls with an 8:1–10:1 sex ratio [6,7].

Prenatal ultrasonography taken after 36 weeks of gestation and perinatal MR imaging is helpful in determining the characteristics of the mass [8]. And MR imaging is useful to differentiate congenital epulis from other masses of oral cavity, thereby providing important information for surgical planning [4,9]. Although spontaneous regression has been reported, when the lesion causes oral-sucking or breathing problems, congenital epulis should be excised in case of airway obstruction and substantial hemorrhage (Fig. 3). Pedunculated mass is easily excised without difficulty, and even after incomplete resection, neither the recurrence nor malignancy has been reported [7]. And the excision of the tumor has no evidence to affect the growth of the bone or the eruption of teeth [13].

In this case, Immunohistochemically, S-100 protein, CD68 was negative which rules out histiocytic features and granular cell melanoma. Histologic examination confirmed the lesion to be consistent with a congenital granular cell tumor [14]. Histological examination of the tumor specimen demonstrated normal thin squamous epithelium and underlying tumor cells with large round or polyhedral cells with pinkish, granular and abundant cytoplasm and surrounding vascular channels.

3. Conclusion

Since the tumor can cause urgent situation such as airway obstruction, perioperative management including anesthetic modalities, route of delivery, surgical plan, and postoperative care should be decided by close cooperation between pediatric surgeon, pediatrician, anesthesiologist, and pathologist.

References


![Fig. 2. A: Histologic feature (H&E, ×100): normal thin squamous epithelium and underlying tumor cells with abundant cellularity. B: Histologic feature (H&E, ×200): large round or polyhedral cells with pinkish, granular and abundant cytoplasm and surrounding vascular channels.](image)

![Fig. 3. Considerations in the management of congenital epulis.](image)

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