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CASE REPORT

Spontaneous regression of congenital epulis: a case report

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Abstract:

Congenital epulis (CE) is a rare benign tumor of the newborn (NB). The recommended treatment has been prompt surgical resection; however, spontaneous regression of the lesion is a more conservative management and should be considered in cases where lesions are not impairing neonatal deglutition and respiration efforts. The aim of this study is to describe the spontaneous regression of a CE in a NB. A one-day-old NB was referred to the hospital dentistry service with the reported presence of an alteration in the oral cavity associated with difficulty sucking during breastfeeding. During clinical evaluation, we observed a fibrous nodular lesion (0.80 x 0.80 cm), gum-like in color, on the right side of the NB's jaw, with a pedicled aspect, and smooth surface. Initially, we proposed changing the breastfeeding position and correctly oriented the mother on how to adapt the child to work with the clinical condition of the lesion. The probable diagnostic hypothesis was that of CE. It was suggested that the lesion be preserved and monitored during the NB's hospital stay time and monthly until six months was reached, followed by quarterly monitoring until 15 months. During the clinical follow-up, significant reduction of the lesion was observed at three months (0.44 x 0.42 cm) and six months (0.20 x 0, 20 cm). After the six months follow up, further reduction of the lesion was not observed until tooth eruption. A longitudinal clinical follow-up was essential to certify the regression of the lesion, promoting the restoration of exclusive natural breastfeeding, avoiding unnecessary procedures, and contributing to the child's quality of life.

Keywords: Infant, Newborn. Gingival neoplasms. Pediatric dentistry. Dental service, Hospital.

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INTRODUCTION

Oral cavity soft tissue lesions are commonly found in newborns (NBs). Among such lesions is congenital epulis (CE) (gingival granular cell tumor, congenital granular cell myoblastoma, or Newmann's tumor), rare, benign tumor composed of mesenchymal tissue that appears exclusively in NBs.[1] This clinical condition presents as a sessile or pedunculated base tumor, normochromic in color, inserted in the crest of the ridge, varying in size from a few millimeters to several centimeters, and with predilection for females (9:1).[2,3]

There are numerous theories about the etiology of the lesion. One of the most accepted today is that primitive mesenchymal cells undergo granulomatous changes with unknown cause.[1] Surgery or follow-up have been the treatments of choice regarding this type of lesion. The size of the lesion and whether it is causing difficulties during breastfeeding are both taken into consideration.[4] However, the literature is not univocal about a standard protocol for clinical approaches to CE cases. Therefore, the documentation of clinical cases allows researchers to add professional knowledge and to guide clinical and hospital conduct when handling such lesions. The purpose of this article was to describe a case of CE in a NB with spontaneous regression and a standard protocol for follow-up.

CASE REPORT

On her first day of life, a female NB (51cm long, 3.330g in weight, and healthy) was referred to the neonatal hospital dentistry department of the Campos Gerais Regional University Hospital. The referral was made due the presence of an alteration in the oral cavity associated with difficulty sucking during natural breastfeeding. During the intraoral clinical examination, a pediculated fibrous nodule (0.80 x 0.80 cm) with a smooth surface was observed; it had regular and intact edges, gum-like coloration, and was attached to the maxillary alveolar ridge on the right midline (Figure 1A and B). The puerperae reported that the NB had difficulty breastfeeding and had no symptoms of airway obstruction.

During the anamnesis, the mother reported an absence of health problems and medication use during the prenatal period. During pregnancy, the mother did not undergo dental prenatal care, and no clinical changes were identified using ultrasound. After a clinical examination was performed, the diagnostic hypothesis of the lesion was congenital epulis. Changing position while breastfeeding was proposed so that the NB could adjust to the anatomical condition of the lesion, enabling it to suck and swallow effectively.

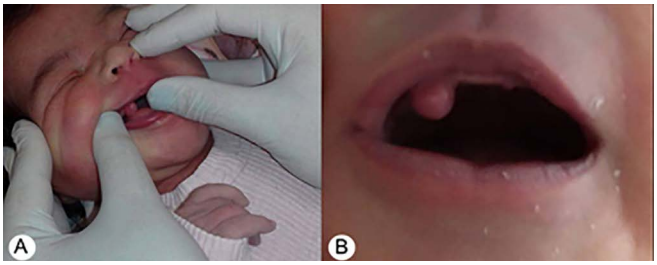

Figure 1. A. B. Initial clinical aspect of the lesion. A nodule located in the maxillary alveolar ridge is observed.

Initially, monitoring and preserving the lesion during the first week was proposed. After changing position orientations, the mother reported that in 24 hours the NB began to suck and adapt better to the mother's breast. Seven days after discharge, the patient showed weight gain (3,600g), confirming the conservative decision of monitoring the lesion. Thus, we chose to follow the evolution of the lesion monthly until six months was reached; this was followed by quarterly monitoring until 15 months. At one and two months of life, the patient was 4,230g and 5,050g, respectively, and the lesion did not increase in size.

During the clinical follow-up session at three months, a significant reduction of the lesion (0.44 x 0.42 cm) was observed, as shown in Figure 2. The same was observed at six months (0.20 x 0.20 cm) (Figure3). At six months, the patient started to eat fruit, vegetables, and bean stock. After this session, the patient was rescheduled to return at 12 months of age for follow-up, but she missed the clinical consultation and returned at 15 months instead. Finally, the deciduous incisors erupted at 15 months, and the lesion has not shown a reduction in size since the six-month follow-up (Figure 4).

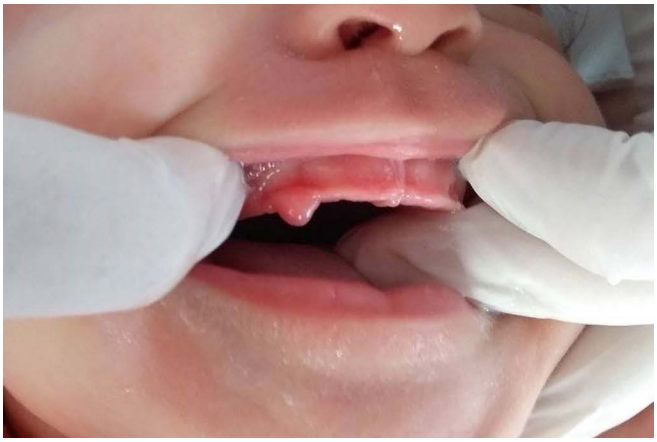

Figure 2. Clinical aspect of the lesion after 4 months of follow up

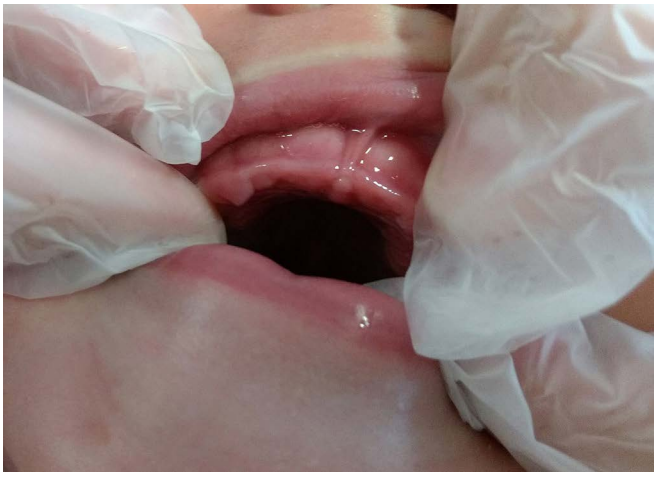

Figure 3. Clinical aspect of the lesion after 6 months of follow up

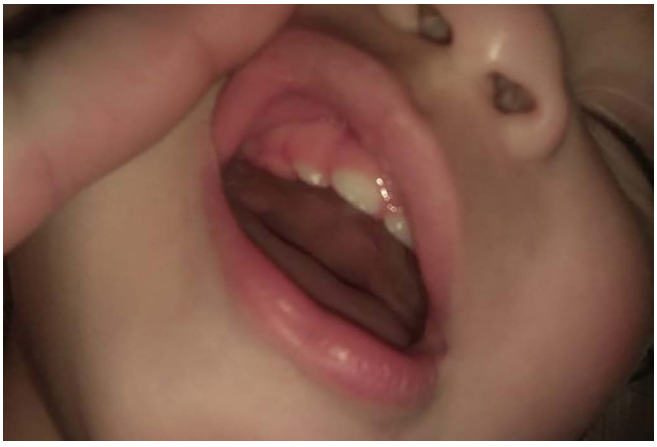

Figure 4. Clinical aspect of the lesion after 15 months of follow up

DISCUSSION

This report demonstrates a CE in a neonate with classic clinical features. Visually, the tumor may appear alarming and aggressive. Due to the lesion's characteristics, the NB may have difficulties during breastfeeding and struggle with breathing,[4,7] particularly with larger lesions, thus risking being underweight and having compromised airways. In this sense, the earlier the diagnosis is made, the lower the chances of CE presenting complications in the NB's life. Although predominantly clinical, the literature has indicated that a diagnosis can be made via ultrasound examinations after the 25th week of pregnancy.[4] However, it is noteworthy that in this case, no oral changes appeared during the routine ultrasounds. Since the treatment approach can only be performed after birth, oral evaluation soon after birth is essential, highlighting the importance of the dentistry presence in neonatal multidisciplinary teams.

In regard to clinical management, surgical excision is suggested to be used in cases where the lesion is relatively large and compromises the airways.[3,5] A more conservative treatment has also been suggested through follow-up appointments to achieve the spontaneous regression of the lesion,[6] which we opted for in this case. Cases of spontaneous regression emphasize the relevance of choosing a less-traumatic approach to CE and preventing NBs from being exposed to unnecessary surgical procedures. In this sense, surgery as the treatment of choice may cause changes in the child's tooth eruption.[2] The NB in this case did not show any changes in the eruption chronology until the follow-up appointment at 15 months. However, we highlight the absence in the literature of a protocol for non-surgical approaches of CE. In this case, the baseline protocol was based on the lesion's size and the absence of complications during breathing and breastfeeding. Monthly follow-up sessions assessed the baby's overall oral health and the lesion's dimensions/characteristics up to six months, followed by quarterly sessions up to 15 months.

Although the literature is controversial regarding the etiology of the lesion,[5] there is a consensus about its benign character.[9] In fact, the spontaneous regression of CE attests to this lesion's harmless behavior. Cases of increased CE have been reported in the literature but have been associated with inflammatory processes resulting from trauma during feeding.[10] In this sense, the knowledge of clinical aspects and treatment options allow the proper management of such cases through simple resolution and early action by professionals.

The longitudinal clinical follow-up in this case was essential to certifying the lesion's regression and the satisfactory restoration of exclusive natural breastfeeding, thus contributing to the child's quality of life. In this sense, the relevance of dentists' clinical–theoretical knowledge regarding neonatal lesions is emphasized. The knowledge of clinical aspects, differential diagnoses, and treatment options allow the proper management of such cases through simple resolution and efficient and early action by professionals.

CONCLUSION

A CE is a rare tumor of the oral cavity that may present spontaneous regression without interfering with tooth eruption. However, its size and its degree of interference with breastfeeding and breathing may indicate the treatment approach. In this sense, the role of neonatal hospital dentistry in NBs' quality of life is fundamental, as it highlights their educative role seeking early and adequate management of lesions in the oral cavity of neonates and to avoid unnecessary procedures.

REFERENCES

1. Zhang B, Tan X, Zhang K, Li Y, Chen J, Zhang F. A study of cell proliferation using immunohistological staining: a case report of congenital granular cell epulis. Int J Pediatr Otorhinolaryngol. 2016 Sep;88:58-62. DOI: https://doi.org/10.1016/j.ijporl.2016.06.047
2. Vinay KN, Anjulo LA, Nitin P, Neha KV, Dhara D. Neumann's tumor: a case report. Ethiop J Health Sci. 2017;27:189-92.
3. Yildirim C, Zerener STM, Sençimen M, Akgün OM, Altug HA, Cicek AF. Congenital gengival granular cell tumor: a case report. J Dent (Shiraz). 2017 Mar;18(1):70-2.
4. Jain N, Sinha P, Singh L. Large congenital epulis in the newborn: diagnosis and management. Ear Nose Throat J. 2019 May;99(7):79-81. DOI: https://doi.org/10.1177/0145561319851498
5. Aparna HG, Jayanth BS, Shashidara R, Jaishankar P. Congenital epulis in the newborn: a case report, immunoprofiling and review of literature. Ethiop J Health Sci. 2014 Nov;24(4):359-62. DOI: https://doi.org/10.4314/ejhs.v24i4.12
6. Ritwik P, Brannon RB, Musselman RJ. Spontaneous regression of congenital epulis: a case report and review of the literature. J Med Case Rep. 2010 Oct;4:331. DOI: https://doi.org/10.1186/1752-1947-4-331
7. McAllister P, O'Neill T, Devlin M. Congenital epulis: a rare case of feeding obstruction in the neonate. Br J Oral Maxillofac Surg. 2019 Jun;57(5):486-9. DOI: https://doi.org/10.1016/j.bjoms.2019.04.004
8. Anisowicz SK, Tolisano AM, Golden JB. Visual diagnosis: newborn with large oral mass. Pediatr Rev. 2017 Mar;38(3):e10-e2. DOI: https://doi.org/10.1542/pir.2016-0037
9. Kokubun K, Matsuzaka K, Akashi Y, Sumi M, Nakajima K, Murakami S, et al. Congenital epulis: the case and review of the literature. Bull Tokyo Dent Coll. 2018;59(2):127-32. DOI: https://doi.org/10.2209/tdcpublication.2017-0028
10. Santos MR, Lopes KM, Franchim GH, Milani BA, Morando FS, Jorge WA. Lesão de células granulares congênita: relato de caso. Rev Cir Traumatol Buco-Maxillo-Fac. 2010 Jan/Mar;10(1):35-8.