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CONGENITAL EPULIS IN NEONATE: CASE REPORT AND CHALLENGES OF INTERDISCIPLINARY CARE

EPÚLIDE CONGÊNITA EM NEONATO: RELATO DE CASO E DESAFIOS DO CUIDADO INTERDISCIPLINAR

EPÚLIDE CONGÉNITA: INFORME DE CASO Y DESAFÍOS DEL CUIDADO INTERDISCIPLINARIO

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ABSTRACT

Introduction: Congenital epulis is a rare benign neoplasm composed of mesenchymal tissue, which presents as a sessile or pedunculated gingival tumor with a normochromic appearance and variable size. Although benign, it may compromise the newborn's sucking reflex and feeding ability.

Objective: To describe the clinical and surgical management of congenital epulis in a newborn, emphasizing the importance of early diagnosis and the restoration of oral functionality and breastfeeding.

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Methodology: Observational case report conducted according to the Surgical Case Report guideline, involving a newborn delivered vaginally, without complications and with parameters appropriate for gestational age, at a maternal and child teaching hospital in southern Brazil.

Results: In the first hours of life, the patient was referred to the neonatal care unit due to breastfeeding difficulties associated with a prominent tumor mass in the oral cavity. Physical examination revealed four lesions, three mandibular and one maxillary, compromising the sucking reflex. The lesions were diagnosed as congenital epulis, requiring nasogastric nutritional support and surgical intervention. The main lesion evolved to necrosis and detached spontaneously on the third day. After removal of the remaining lesions, there was restoration of gingival alignment, recovery of the sucking reflex, and initiation of breastfeeding. Histopathological examination confirmed the diagnosis of ulcerated granular cell epulis. During follow-up, there was no recurrence or respiratory or feeding complications.

Conclusion: Early diagnosis enables immediate intervention, preventing complications and promoting complete functional and nutritional recovery of the newborn, particularly regarding breastfeeding.

Keywords: Congenital Epulis. Neonate. Breast Feeding. Maternal and Child Health. Case Reports.

RESUMO

Introdução: A epúlide congênita é uma neoplasia benigna rara, composta por tecido mesenquimal, que se manifesta como tumor gengival séssil ou pedunculado, de coloração normocrômica e tamanho variável. Embora de caráter benigno, pode comprometer a sucção e a alimentação do recém-nascido.

Objetivo: Descrever o manejo clínico e cirúrgico da epúlide congênita em uma recém-nascida, enfatizando o diagnóstico precoce e a restauração da funcionalidade oral e do aleitamento materno.

Metodologia: Relato de caso observacional conduzido segundo a diretriz Surgical Case Report, envolvendo uma recém-nascida de parto vaginal, sem intercorrências e com parâmetros adequados para a idade gestacional, atendida em hospital materno-infantil do Sul do Brasil.

Resultados: Nas primeiras horas de vida, a paciente foi encaminhada à Unidade de Acolhimento Neonatal e observaram-se dificuldades na amamentação associadas à presença de uma massa tumoral saliente na cavidade bucal. O exame físico revelou quatro lesões, três mandibulares e uma maxilar, comprometendo o reflexo de sucção. As lesões foram diagnosticadas como epúlide congênita, exigindo suporte nutricional por sonda nasogástrica e intervenção cirúrgica. A lesão principal evoluiu para necrose e destacamento espontâneo no terceiro dia. Após a remoção das demais, houve recuperação da relação dos rodetes gengivais, retorno do reflexo de sucção e início do aleitamento. O exame anatomopatológico confirmou o diagnóstico de epúlide de células granulares ulceradas. No acompanhamento, não houve recidiva nem intercorrências respiratórias ou alimentares.

Conclusão: O diagnóstico precoce possibilita uma intervenção imediata, prevenindo complicações e promovendo a recuperação funcional e nutricional do recém-nascido, principalmente a amamentação.

Palavras-chave: Epúlide Congênita. Neonato. Aleitamento Materno. Saúde Materno-Infantil. Relatos de Casos.

RESUMEN

Introducción: El épulis congénito es una neoplasia benigna poco frecuente, compuesta por tejido mesenquimatoso, que se manifiesta como un tumor gingival sésil o pediculado, de coloración normocrómica y tamaño variable. Aunque benigno, puede comprometer el reflejo de succión y la alimentación del recién nacido.

Objetivo: Describir el manejo clínico y quirúrgico del épulis congénito en una recién nacida, destacando la importancia del diagnóstico precoz y la restauración de la funcionalidad oral y la lactancia materna.

Metodología: Informe de caso observacional realizado de acuerdo con la directriz Surgical Case Report, que involucró a una recién nacida producto de parto vaginal, sin complicaciones y con parámetros adecuados para la edad gestacional, atendida en un hospital materno-infantil del sur de Brasil.

Resultados: En las primeras horas de vida, la paciente fue derivada a la unidad neonatal debido a dificultades en la lactancia, asociadas a la presencia de una masa tumoral prominente en la cavidad bucal. El examen físico reveló cuatro lesiones, tres mandibulares y una maxilar, que comprometían el reflejo de succión. Las lesiones fueron diagnosticadas como épulis congénito, requiriendo apoyo nutricional por sonda nasogástrica e intervención quirúrgica. La lesión principal evolucionó hacia la necrosis y se desprendió espontáneamente al tercer día. Tras la extirpación de las demás, se observó la recuperación del alineamiento gingival, el restablecimiento del reflejo de succión y el inicio de la lactancia. El examen anatomopatológico confirmó el diagnóstico de épulis de células granulares ulcerado. Durante el seguimiento, no se observaron recidivas ni complicaciones respiratorias o alimentarias.

Conclusión: El diagnóstico precoz permite una intervención inmediata, previniendo complicaciones y favoreciendo la recuperación funcional y nutricional completa del recién nacido, especialmente en relación con la lactancia materna.

Palabras clave: Epúlide Congénito. Neonato. Lactancia Materna. Salud Materno-Infantil. Informes de Casos.

1 INTRODUCTION

Congenital epulid is a rare benign neoplasm composed of mesenchymal tissue that manifests clinically as a sessile or pedunculated gingival tumor, normochromic in color, ranging in size from a few millimeters to several centimeters (Pedroso et al., 2020; Abera et al., 2024). Commonly located in the anterior alveolar mucosa of the maxilla of newborns (Kang; Kang, 2022; Rauniyar et al., 2023), this condition was first described in 1871 and has different nomenclatures in the literature, including Neumann's tumor, congenital granular cell epulid, congenital granular cell lesion, congenital infant epulid, newborn gingival granular cell tumor, congenital granular cell myoblastoma and granular cell fibroblastoma (Pedroso et al., 2020; Lim et al., 2023; Rauniyar et al., 2023).

Its incidence is extremely rare, occurring in about 0.0006% of live births, with less than 200 cases reported in the literature to date (Alallah; Alallah; Mohtishan, 2022; Lim et al., 2023; Rauniyar et al., 2023). In addition, it is a condition most commonly observed in female infants, with an approximate ratio of 10:1 (Babu et al., 2021; Xavier et al., 2022; Lim et al., 2023) and diagnosis in the first days of life (Pedroso et al., 2020; Alallah; Alallah; Mohtishan, 2022; Dulal et al., 2023).

Breastfeeding is essential for the health of the newborn, providing essential nutrients and contributing to the establishment and maintenance of the emotional bond between mother and child (Atyeo; Alter, 2022; Gavine et al., 2023). However, the presence of congenital alterations in the oral cavity can interfere with this process. Congenital epulid, a rare benign lesion, can compromise the infant's breathing and proper positioning during breastfeeding, negatively impacting the weight gain and overall health of the newborn (Pedroso et al., 2020; Ye et al., 2021; Paredes et al., 2022).

Therefore, it becomes essential to adopt appropriate management strategies to mitigate the impacts of this condition on the life of the baby and his family. Interdisciplinary collaboration between different health professionals, such as pediatricians, dentists, speech therapists, and nurses, is crucial to improve the quality of care, promote comprehensive care, and meet patient needs more effectively (BeBendowska; Baum 2023). This case report describes the interdisciplinary approach adopted for the management of congenital epulid in a newborn, emphasizing the importance of early diagnosis and surgical intervention to restore oral functionality and its implications for the nutrition and breastfeeding of the neonate.

2 CASE REPORT

The case report was conducted according to the criteria established by the SCARE (Surgical Case Report) guideline to ensure standardization and quality of clinical case presentation (Sohrabi et al., 2023).

A healthy female newborn was born vaginally without intercurrences and with adequate parameters for gestational age, weight and length, in a maternal-infant teaching hospital in southern Brazil. In the first hours of life, she was referred to the neonatal care unit due to breastfeeding difficulties, associated with the presence of a protruding tumor mass in the oral cavity.

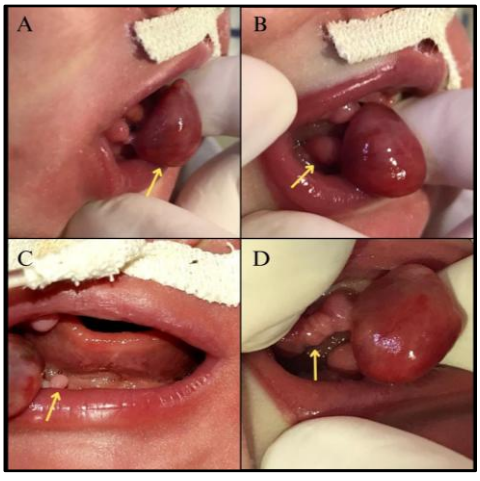
In the extraoral physical examination, all the structures evaluated and the patient's vital signs were within normal limits. However, intraoral physical examination revealed four lesions of varying sizes in the right region of the oral cavity, three located in the mandible and one in the maxilla.

The first and largest lesion was located in the mandibular gingival rodete, with a rounded shape, reddish color, smooth and intact surface, pedicled insertion, and fibrous consistency, approximately 3 x 3 x 3 cm in size (Fig. 1A).

The second and third mandibular lesions had a rounded shape, pink color, smooth and intact surface, sessile insertion, and fibrous consistency. The second measured approximately 1 x 1 x 1 cm (Fig. 1B) and was located posterior to the main lesion, while the third, located anteriorly, measured approximately 0.5 x 0.5 x 0.5 cm (Fig. 1C). The fourth lesion, located in the maxillary gingival rodete, had a nodular appearance with three main projections, pink color, smooth and intact surface, sessile insertion, fibrous consistency, and approximate dimensions of 2 x 0.5 x 1 cm (Fig. 1 D).

Figure 1

Initial appearance of the lesions

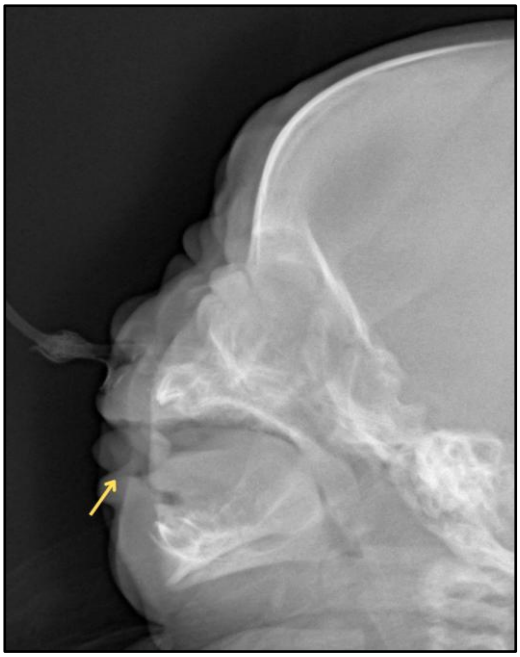


Source: The authors, 2025.

The other intraoral structures examined were within normal limits. However, the sucking reflex was compromised, and the patient was being fed through a nasogastric tube. In addition, abdominal and transfontanellar ultrasonography did not show relevant clinical findings, and lateral facial radiography did not show bone involvement resulting from the lesions (Fig. 2).

Figure 2

Lateral radiograph of the face indicating absence of bone involvement



Source: The authors, 2025.

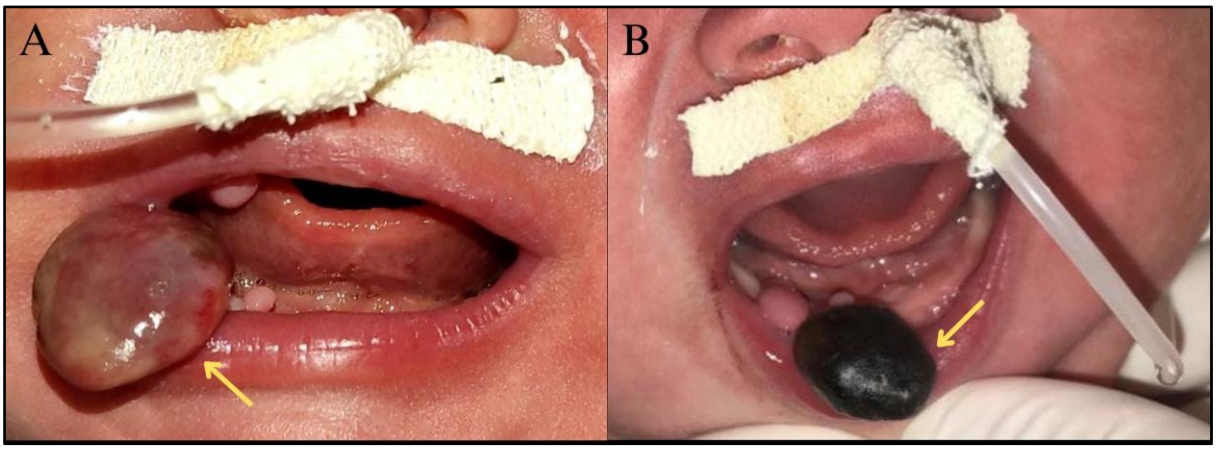
In view of the clinical picture presented by the patient, a joint discussion was held with the interdisciplinary team, composed of pediatricians, dental surgeons, neonatologists, speech therapists and nurses, in order to establish an appropriate therapeutic plan at the appropriate time. The lesions were preliminarily diagnosed as congenital epullid. The presence of tumor lesions in the patient's oral cavity, associated with breastfeeding difficulties, required a collaborative approach to determine the best clinical and surgical management. In addition, the team was dedicated to providing clear and accurate information to parents, reassuring them about the benign nature of the lesions and the favorable prognosis after treatment. It was established that the patient would be followed up in the first 48 hours and, for nutrition, the enteral route was chosen with the use of a nasogastric tube and human milk.

The main lesion progressed to tissue necrosis (Fig. 3), with spontaneous fall occurring on the third day of the patient's life.

Considering the patient's clinical evolution and the impact of persistent lesions, it was determined, after careful analysis by the interdisciplinary team, that surgical removal of the remaining lesions was necessary. Although the main lesion progressed to tissue necrosis and resolved spontaneously, the other lesions continued to cause difficulties in breastfeeding and presented a risk of complications. The decision aimed to ensure the normalization of feeding functions and prevent possible additional problems in the patient's development.

Figure 3

Evolution of the lesion on the second (A) and third (B) day of life

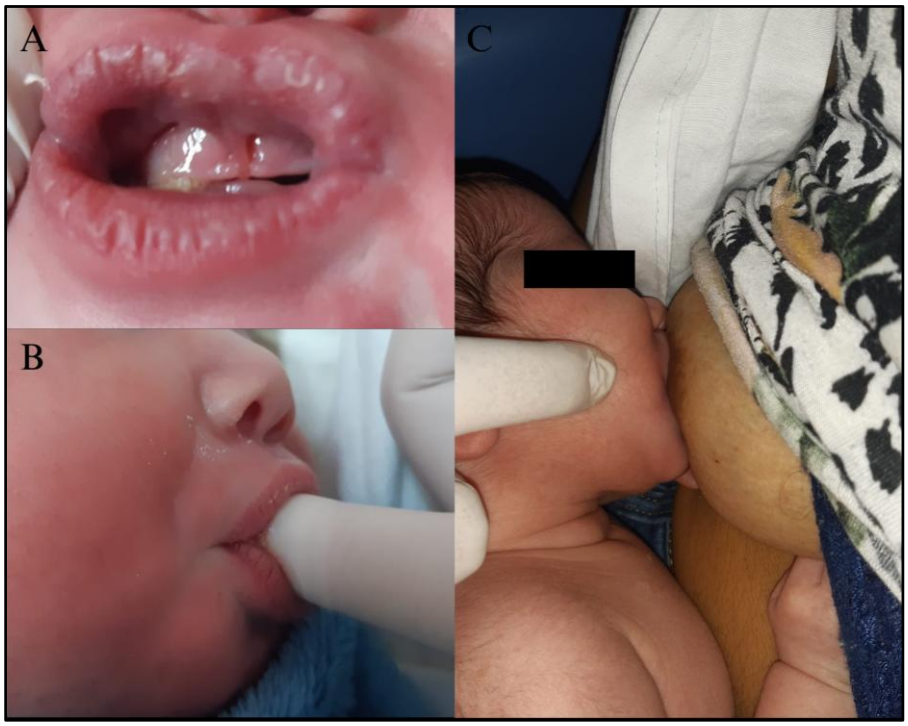


Source: The authors, 2025.

On the fourth day, all remaining lesions were surgically removed under general anesthesia, using electrocautery, without intercurrences. The excised samples were sent to the local pathology department for histopathological examination. After the procedure, the harmonious recovery of the gingival rodete relationship was observed (Fig. 4A), the reestablishment of the sucking reflex (Fig. 4B) and the initiation of breastfeeding (Fig. 4C). The patient was discharged from the hospital two days after the intervention, with outpatient follow-up scheduled for 30 days.

Figure 4

Postoperative aspects



Source: The authors, 2025.

During the macroscopic examination, a fragment of dark brown and soft tissue was received, with dimensions of 1.5 x 1.2 × 0.7 cm. Histological examination revealed a nodular lesion of squamous mucosa, with areas of ulceration, covered by fibrin and bacterial colonies. The interior of the lesion was composed of polygonal cells with round and homogeneous nuclei, granular and eosinophilic cytoplasm, permeated by a large number of dilated and congested blood vessels, with no signs of cellular atypia. Based on the findings of the anatomopathological examination, the diagnosis was consistent with ulcerated granular cell epulid. In the subsequent follow-up, the mother did not report breastfeeding difficulties or changes in the baby's breathing, and the tumor lesions did not recur.

4 DISCUSSION

The clinical diagnosis of congenital epullid can be facilitated by the macroscopic characteristics of the lesion, but it is the histological analysis that reveals its typical features, such as the proliferation of rounded polygonal cells with eosinophilic granular cytoplasm and rounded central nucleus, covered by thin squamous epithelium. This histopathological evaluation is essential for differential diagnosis, especially due to the clinical similarities of epulid with other oral conditions, such as teratoma, rhabdomyooma, rhabdomyosarcoma, congenital cystic cyst, congenital fibrosarcoma, congenital lipoma, hemangioma, granuloma,

and infantile myofibroma (Rauniyar et al., 2023; Babu et al., 2021). Confirmation of the diagnosis through anatomopathological examination ensures an appropriate therapeutic approach and excludes the possibility of more serious conditions (Abera et al., 2024; Ye et al., 2021; Paredes et al., 2022).

Although congenital epulid (CE) is a rare and benign tumor, an early differential diagnosis is essential, because the earlier it is identified, the lower the chances of complications in the newborn's life (Pedroso et al., 2020; Alallah et al., 2022; Dulal et al., 2023). The lesion tends to grow on the anterior alveolar crest of the newborn, more on the maxilla than on the mandible, with a ratio of 3:1, commonly located in the anterior alveolar mucosa of the maxilla of newborns (Kang; Kang, 2022; Rauniyar et al., 2023). In this case, the largest lesion was located in the mandible.

The presence and persistence of the lesions can make breastfeeding difficult due to the involvement of the oral cavity, which can cause failure in weight gain and malnutrition. Addressing oral problems not only facilitates the breastfeeding process but also contributes significantly to the well-being of the newborn (Lim et al., 2023; Abera et al., 2024).

The decision to perform surgical removal of the lesions was carefully discussed by the interdisciplinary team, who considered the importance of ensuring the baby's oral functionality and comfort. The technique chosen was the use of electrocautery, due to its effectiveness, safety and ability to provide precise removal with less risk of bleeding and a faster recovery. This minimally invasive approach was essential to avoid complications and ensure the continuity of breastfeeding, which is crucial for the healthy development of the newborn (Pedroso et al., 2020; Kang; Kang, 2022).

The collaboration between pediatricians, dentists, neonatologists, speech therapists, and nurses was decisive for the success of the treatment, ensuring the newborn full support in the postoperative period, the prevention of complications, and the promotion of global well-being (Xavier et al., 2022). The integration of different professional perspectives allowed for more comprehensive decision-making, contemplating not only stomatological aspects, but also vital functions, such as feeding and breathing, in order to ensure continuous monitoring of neonatal development (Bendowska, 2023; Baum et al., 2023).

As a result, satisfactory recovery was observed, with the reestablishment of the sucking reflex and the beginning of breastfeeding, which are fundamental for the growth and development of the newborn. The postoperative follow-up allowed us to confirm the resolution of the condition and the adequate functional evolution. As a limitation, this is a single case report, which restricts the generalization of the findings. Despite the positive results,

additional studies with a larger number of cases and prolonged follow-up are needed to consolidate the evidence on the management of congenital epullid.

5 FINAL CONSIDERATIONS

The clinical presentation and the approach adopted reinforce the relevance of this diagnosis and contribute to the surgical literature by demonstrating the challenges and strategies involved in the treatment of this uncommon condition and ensuring adequate and personalized management for each case.

Early diagnosis is essential, as it enables immediate intervention, preventing complications and promoting the patient's complete recovery. Appropriate treatment, combined with postoperative follow-up and interdisciplinary collaboration, is essential to monitor the evolution and ensure the absence of recurrences. The joint action of professionals, such as pediatricians, dental surgeons, speech therapists and nurses, offers a more effective and comprehensive approach.

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