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LIPOBLASTOMA ON THE LATERAL BORDER OF THE TONGUE IN A NEONATE - A RARE CASE REPORT

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Abstract: Lipoblastoma is a rare and benign mesenchymal neoplasm, originating from embryonic fat cells, which mainly affects children, with a higher incidence in boys. Its clinical manifestation typically presents as a palpable, painless and rapidly growing mass, most frequently on the extremities of the body, with rare occurrences in the head and neck region. This article describes a unique case of oral lipoblastoma in a newborn, located on the lateral edge of the tongue, which required assessments in the areas of neonatology and oral and maxillofacial surgery. The lesion, measuring around 2 cm, made breastfeeding difficult, leading to the decision to perform an incisional biopsy under general anesthesia. Histopathological analysis confirmed the diagnosis of lipoblastoma and, considering the patient's age and the local anatomy, a follow-up was chosen rather than immediate excision. Magnetic resonance imaging performed after one year showed normal results, and regression of the lesion was observed. Although lipoblastoma is a benign neoplasm, the rate of local recurrence is significant, especially in cases of lipoblastomatosis, an infiltrative variant, which makes long-term monitoring essential.
Keywords: Lipoblastoma, child, tongue.

INTRODUCTION

Lipoblastoma is a rare, benign and fast-growing mesenchymal tumor arising from embryonic fat cells. It occurs predominantly in infancy and early childhood, affecting males more often (WAN et al., 2021; BRUYER et al., 2012). Its most common location is in the extremities of the body, making its appearance in the head and neck rare (LOMORO et al., 2021; MC RAE et al., 2021; HANAFAH et al., 2013).

The tumor consists of a lobulated tissue containing stellate mesenchymal cells and lipoblasts, as well as adipocytes in various stages of maturity (WAN et al., 2021; AMELOOT et al., 2022). Most lipoblastomas are well encapsulated and malignant degeneration has not been reported (BRUYER et al., 2012; LOMORO et al., 2021). Clinically, it presents as a superficial, palpable, solitary and painless mass. The ideal treatment is complete, non-mutilating surgical removal of the tumor due to its high growth rate and consequent local effects on the surrounding areas (WAN et al., 2021; BRUYER et al., 2012; LOMORO et al., 2021).

The definitive diagnostic standard is histopathological examination, together with immunohistochemistry (BRUYER et al., 2012; HANAFAH et al., 2013). If treated correctly, the prognosis is excellent, despite the high rate of local recurrence, especially in cases of lipoblastomatosis, an infiltrative variant. Long-term follow-up is therefore essential (MATOUS et al., 2021).

In this article, we aim to report a rare case of oral lipoblastoma on the lateral border of the tongue, with a one-year follow-up.

CASE REPORT

This was a male, NB, leucoderma patient, born at the Maternal and Child University Hospital (HUMAI-UEPG), who was requested to be evaluated by the Neonatal Department and the Oral and Maxillofacial Surgery Department due to the presence of a lesion on the dorsum of the tongue. Clinical examination revealed a sessile lesion with a whitish appearance, measuring around 2 cm on the right side of the tongue (Image 1), which made breastfeeding difficult.

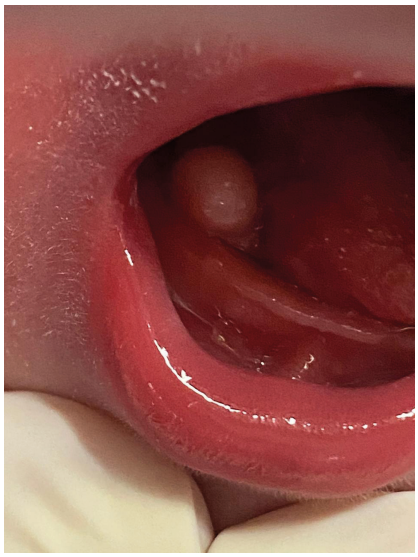

Image 1 - Lesion on the lateral edge of the tongue

The patient was not gaining weight, so it was decided to perform a biopsy under general anesthesia. At the time of the procedure, the lesion appeared to be infiltrative, so an incisional biopsy was performed (Image 2).

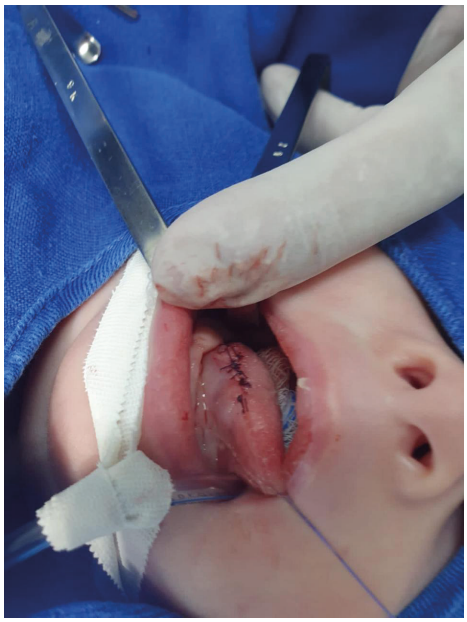

Image 2 - Incisional biopsy performed

The material was sent for histopathological analysis, which identified a lipoblastoma (Image 3), a rare, fast-growing benign lesion.

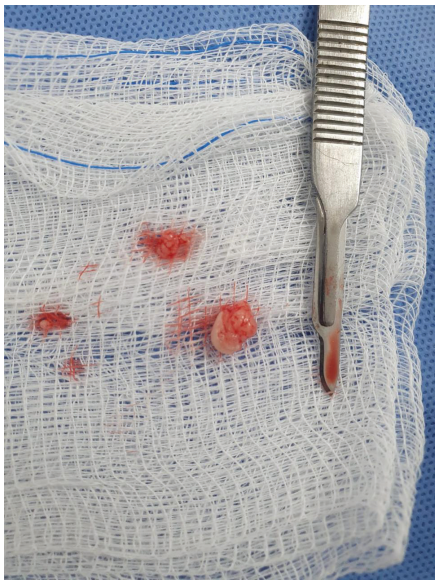

Image 3 - Material sent for histopathology

Due to the fact that the patient was a newborn and the local anatomy, it was decided to follow up with total excision of the lesion after the patient was one year old, in order to improve the anatomical formation of the airways. Close to this date, a magnetic resonance imaging (MRI) scan of the face and neck was requested, with normal results (Image 4).

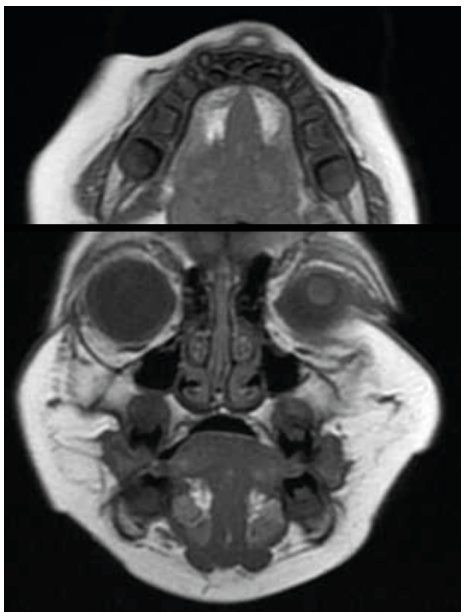

Image 4 - Axial and coronal MRI of the face and neck showing normality

Clinical examination also revealed that the lesion had regressed. The patient is currently being followed up at the clinic, with no complaints.

DISCUSSION

Lipoblastoma is a rare, benign, soft tissue neoplasm arising from the proliferation of embryonic adipocytes (MATOUS et al., 2021). The incidence is almost exclusively in childhood, with 75%-90% before the age of 3, with a preference for males, with a male: female ratio of 3:1 (WAN et al., 2021; BRUYER et al., 2012; LOMORO et al., 2021), and represents 4% to 6% of soft tissue tumors in children (MERZOUQI et al., 2021).

Lipoblastomas are generally located within the subcutaneous plane throughout the body (WAN et al., 2021), being more frequent in the trunk, extremities, retroperitoneum and mediastinum, and extremely rare in the oral cavity, corresponding to less than 1.7% of all benign oral soft tissue tumors (MATOUS et al., 2021; HANAFAH et al., 2013). It presents as a painless soft tissue mass with a characteristic yellowish color, soft consistency and progressive growth (HANAFAH et al., 2013; MATOUS et al., 2021). Symptoms depend on the location and are secondary to the compression of the mass, such as airway obstruction (MERZOUQI et al., 2021) or interference with speech and chewing when located in the oral cavity (HANAFAH et al., 2013).

As the clinical and imaging findings are non-specific, the diagnostic hypotheses can include a wide range of benign and malignant masses, including hemangiomas, lipomas and myxoid liposarcoma. It is therefore essential to carry out a histopathological examination for diagnostic purposes, as well as to exclude the possibility of malignancy (MATOUS et al., 2021).

Histologically, lipoblastomas contain lobules of mature adipocytes organized by fibrous septa, lipoblasts in different stages of differentiation, mesenchymal cells and a plexiform capillary network. The presence of these lipoblasts can distinguish this lesion from lipomas, which lack this type of cell and are uncommon tumors in children. Some cases require molecular confirmation for diagnostic purposes. The PLAG1 gene rearrangement, identified in pleomorphic adenomas of the salivary glands and in lipoblastomas, can be identified, distinguishing the lesion from hemangioma and liposarcoma (MATOUS et al., 2021).

The treatment of choice is complete excision. However, surgical morbidity must be taken into account in cases of total excision. Therefore, a conservative approach, preserving function, especially in sensitive areas such as the floor of the mouth, is acceptable, since there are no reports of malignant transformation or distant metastasis, in addition to the possibility, albeit rare, of spontaneous resolution (MATOUS et al., 2021; HANAFAH et al., 2013; MERZOUQI et al., 2021).

Possible surgical complications of excision of masses in the sublingual space include temporary or permanent paresthesia of the tongue, formation of a ranula due to rupture of the salivary ducts and hemorrhages (HANAFAH et al., 2013).

The prognosis is good, the evolution is unpredictable, with recurrence in 9 to 25% of cases. However, recurrences can be successfully excised if necessary (MERZOUQI et al., 2021; HANAFAH et al., 2013; MATOUS et al., 2021). As there were no compressive symptoms or other complaints in this case, the approach was one of follow-up.

CONCLUSION

Lipoblastoma is a rare benign tumor which, although it grows rapidly, has a good prognosis when treated specifically by surgical excision. Despite its predominance in children and preference for subcutaneous areas of the extremities, its occurrence in regions such as the oral cavity is extremely rare, as observed in the case described. The importance of histopathological diagnosis is crucial in differentiating this neoplasm from other benign and malignant lesions, ensuring appropriate treatment. Although there is a significant recurrence rate, conservative management, when indicated, and long-term follow-up are essential to guarantee functionality.

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