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Case report

Congenital Ranula in a Newborn: A Case Report

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Abstract
Congenital ranula is a rare, benign, mucus-filled cystic lesion arising from the sublingual gland and presenting in the floor of the mouth. Although often asymptomatic, enlargement may cause tongue displacement, feeding difficulties, and potential airway compromise in neonates and infants. This report describes a congenital ranula in a 2-month-old female infant who presented with a swelling in the floor of the mouth that had been present since birth. Clinical examination revealed a well-circumscribed, bluish, translucent, fluctuant, and non-tender cystic lesion on the right side of the floor of the mouth, resulting in tongue elevation and displacement. Ultrasonography demonstrated a well-defined cystic lesion consistent with a congenital ranula. Following clinical and radiological assessment, the patient underwent surgical marsupialization under anesthesia, involving opening and drainage of the cyst. The postoperative course was uneventful, and satisfactory healing was observed during follow-up. This case highlights the importance of early recognition and appropriate management of congenital ranula to prevent potential complications, particularly feeding difficulties and airway obstruction. Treatment should be individualized according to the lesion's size, clinical manifestations, and anatomical extent.
Keywords. Congenital Ranula; Neonatal Ranula; Floor of Mouth; Sublingual Gland; Oral Cyst; Newborn.

Introduction

A ranula is a cystic swelling that occurs on the floor of the mouth due to the obstruction of the sublingual gland duct. While ranulas are typically acquired, there are rare instances where they can be present at birth and are known as congenital ranula cysts. The prevalence of congenital ranula is 0.74% [1].

The term "ranula" refers to the swelling in the floor of the mouth that resembles a frog's belly. Congenital ranula cysts are typically asymptomatic and may go unnoticed until they become large enough to cause feeding difficulties, respiratory distress, or other complications. Diagnosis is primarily clinical, with imaging studies, such as ultrasonography or computed tomography (CT) scan, serving to confirm the presence and extent of the cyst [2].

Ranula is a mucus-filled cystic lesion arising from the sublingual gland due to ductal obstruction or extravasation of mucus into adjacent tissues [3]. It can be either congenital or acquired and is classified into different types based on the anatomical location and extension. The incidence rate of ranula is 0.02% per 1000 individuals [4]. Sometimes, they remain undetected until they progress to a size that causes respiratory difficulties, feeding issues, or other problems. To avoid these consequences, early diagnosis and treatment are essential.

Despite being a rare congenital lesion, ranula may remain undiagnosed during early infancy until its enlargement causes functional complications, including feeding difficulties, tongue displacement, and respiratory distress. The limited number of reported congenital cases highlights the importance of documenting their clinical presentation, diagnostic features, and appropriate management strategies. Therefore, this study aims to present a rare case of congenital ranula in a 2-month-old female infant, highlighting its clinical and ultrasonographic characteristics, diagnostic approach, and management through observation and marsupialisation, with emphasis on the importance of early recognition and appropriate treatment to prevent potential complications.

Case Presentation

A 2-month-old female baby was admitted to the Department of Oral Medicine at the Faculty of Dentistry, University of Zawia, with a complaint of swelling in the floor of the mouth that had been noticed since birth. Clinical examination revealed a well-circumscribed, bluish, translucent, fluctuant, and non-tender cystic swelling located on the right side of the floor of the mouth. The lesion caused mild difficulty and respiratory difficulty and resulted in elevation and displacement of the tongue.

Ultrasonography demonstrated a well-defined cystic lesion consistent with a congenital ranula. Based on the clinical and radiological findings, a diagnosis of congenital ranula was established. The lesion was managed by observation and marsupialisation with satisfactory healing and no recurrence during follow-up.

The differential diagnosis of a congenital cystic lesion in the floor of the mouth includes: Congenital ranula, Dermoid cyst, Epidermoid cyst, Lymphatic malformation and Thyroglossal duct cyst.

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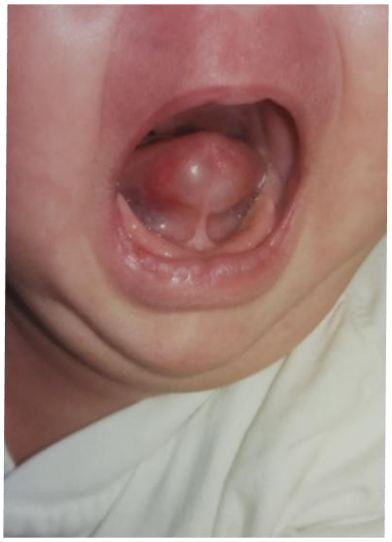

Figure 1. Clinical photograph of the patient with a congenital ranula - swelling originating from the floor of the mouth, almost filling the mouth, and pushing the tongue backwards

Following clinical evaluation and confirmation of the diagnosis of congenital ranula, the patient underwent surgical management by marsupialisation under anaesthesia. The cyst was opened, and its contents were drained. The procedure was completed. Histopathological examination of the specimen, when available, demonstrated findings consistent with a ranula. The postoperative course was uneventful. The patient demonstrated satisfactory healing of the surgical site.

Figure 2. Clinical photograph of the patient with a congenital ranula – intraoperative surgery

Discussion

The term ‘ranula’ stems from the Latin word 'Rana,' which means frog, due to its resemblance to a frog's underbelly [5]. Hippocrates attributed ranula to chronic inflammation, but Paré believed that it signifies the descent of the brain and pituitary matter (Historical). A ranula results from the obstruction of the sublingual gland ducts, leading to proximal expansion, or by disruption of minor salivary ducts that cause mucus to extravasate in surrounding structures, which lack an epithelial lining [6].

Congenital ranula cysts are rare, and only a few cases have been reported in the literature. The exact aetiology of congenital ranula cysts is not well understood, but it is believed to result from a developmental anomaly in the sublingual gland or duct [7]. Congenital ranula may be identified at birth or during the first few days or weeks of life. Previous reports describe both asymptomatic lesions and lesions associated with significant feeding and respiratory difficulties. In one reported full-term neonate, a 1.5 × 1 cm bluish, translucent floor-of-mouth swelling elevated the tongue but did not interfere with feeding or breathing.

Conclusion

Congenital ranula is an uncommon neonatal oral lesion that should be considered in the differential diagnosis of cystic swellings of the floor of the mouth. Early recognition is important because enlargement may interfere with feeding or, in severe cases, compromise the airway. Management should be individualised according to the size, symptoms, and anatomical extension of the lesion.

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Consent for Publication

Written informed consent was obtained from the patient for publication of this case report and the accompanying clinical photographs.

Availability of Data and Materials

All data supporting the findings of this case report are included in the manuscript.

Competing Interests

The authors declare that they have no competing interests.

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