Case Report

A Rare Case of Congenital Ranula

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Abstract

Simple ranula is a cystic swelling confined to the floor of mouth while plunging ranula presents with extension to the neck. Congenital ranula presenting with symptoms of feeding difficulties is a very rare occurrence. There is paucity of literature regarding the management of large congenital ranula. Varied treatment options are described for the management of ranula with variable recurrence rate. In paediatric and adult patients, ranula is considered as a type of extravasation cyst and removal of sublingual gland is advocated to remove the sources of extravasation. Congenital ranula is usually a variant of retention cyst and should be treated with marsupialisation or simple excision of cyst while cyst excision with sublingual sialadenectomy should be reserved for recurrent cases.

Keywords: Congenital, histopathology, management, ranula

Introduction

Ranula is a cystic swelling in the floor of mouth. It is classified into two types according to its location. Ranula limited to the floor of mouth is called simple ranula while that extending from floor of mouth to cervical region through mylohyoid muscle is called plunging or cervical ranula. Congenital ranula is rare with prevalence of 0.74%.[1] Simple ranula is common during second decade of life while plunging ranula occurs frequently during third decade of life.[2] Ranula can either be considered as a form of extravasation pseudocyst or an epithelial lined retention cyst. There are different treatment options available for the treatment of ranula ranging from medical management,[3] simple needle aspiration, sclerotherapy, marsupialisation, excision of cyst and excision of cyst with sublingual gland with varied success rates.[4]

Herein, we briefly outline the etiopathogenesis and its preferred management options for symptomatic large congenital ranula with respect to ranula encountered in older population.

Case Report

A 10-day-old baby girl was brought by her parents with a history of swelling on the floor of mouth present since birth. The baby was born full term by normal vaginal delivery. The mother noticed a swelling on the floor of mouth of the baby immediately after birth. The baby was unable to suck effectively due to large size of the swelling. Hence, the baby was fed breast milk with the help of a dropper. On inspection, there was a bluish-coloured translucent swelling originating from the right side of the floor of mouth. The swelling was almost filling the mouth and pushing the tongue backwards and thus making it barely visible [Figure 1]. On palpation, it was a soft, smooth surfaced, cystic/fluctuant, non-pulsatile swelling measuring about 5 cm × 4 cm with normal overlying mucosa. There was no palpable neck swelling. There was no respiratory distress. Clinical diagnosis of congenital ranula was made. As the baby was having feeding difficulty, decision was taken for early surgical intervention. The large cyst prevented passage of endotracheal tube into trachea for administration of general anaesthesia. Hence, the cyst had to be aspirated intraorally to decompress with a wide bore needle prior to intubation. Around 8 cc of viscous material was aspirated that helped to reduce the size of the cyst thus allowing the anaesthetist to proceed with intubation. Linear incision was made at the floor of mouth lateral and parallel to submandibular duct. Marsupialisation of the cyst was performed along with a biopsy from the cyst wall. The baby

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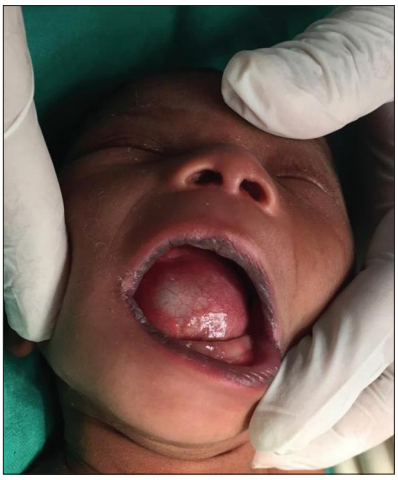

Figure 1: Swelling originating from the floor of mouth almost filling the mouth and pushing the tongue backwards

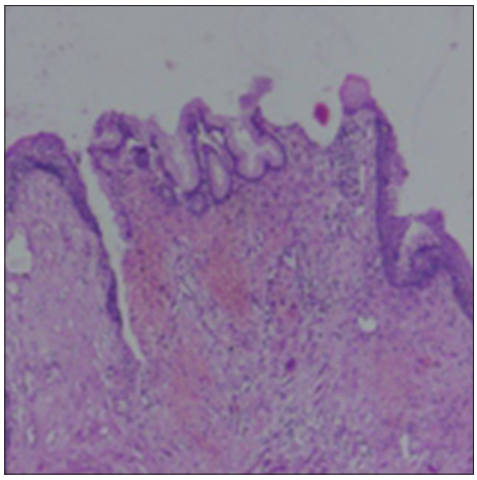

Figure 2: Photomicrograph shows cyst wall lined by mature squamous and columnar epithelium consistent with ranula, retention type

was started feeding through orogastric tube from the next day. Breast feeding was started from 5th post-operative day. Histopathological report revealed cyst wall lined by mature squamous and columnar epithelium consistent with ranula, retention type ranula [Figure 2]. There is no recurrence even after 1 year of follow-up.

Discussion

Symptomatic congenital ranula in neonates and infants is extremely rare with only eleven cases reported in English literature. Congenital ranula ranges from a small asymptomatic lesion to a large antenatally detected lesion. In our reported case, mother of the patient had not undergone antenatal scans in the last trimester of pregnancy as a result of which the ranula was identified only after birth when it resulted in feeding difficulties. Ranula results from either mucus retention due to duct atresia, acinus dilatation or due to extravasation of mucus due to duct disruption and injury to the sublingual gland.[5] Congenital ranula usually occurs following imperforated sublingual salivary gland duct or ostial stenosis. There is no consensus regarding the treatment of ranula with varied recurrence rates reported following different modalities of management. Recurrence rate after marsupialisation is 66.7% while the least rate of reported recurrence is 1.2% following excision of sublingual gland along with ranula.[6] Although effective in minimising the risk of recurrence, sublingual sialadenectomy increases the risk of injury to Wharton's duct and lingual nerve. There is paucity of literature regarding the management of congenital ranula. Large antenatally detected lesion sometimes require EXIT[7] procedure. Asymptomatic patients with congenital ranula should be kept under observation for 6 months before proceeding to any treatment.[8] Symptomatic small size congenital ranula has been treated successfully with needle aspiration[9] while recurrence has been reported by Ozkan *et al*.[10] after needle aspiration. Symptomatic congenital ranula had also been treated successfully by marsupialisation[11] and complete excision of the cyst[12,13] as well. In our reported patient, there was no recurrence at 12 months after marsupialisation of ranula. Histopathology of cyst wall showed matured squamous and columnar epithelium lining which was consistent with retention type ranula that is in line with previously reported cases.[12,13] Our case report has raised a question about the proposed aetiology of congenital ranula as extravasation cyst on the basis of available histopathology reports of congenital ranula which demonstrated lining epithelium in cyst wall. In paediatric or adult patients where ranula is considered as extravasation cyst, removal of sublingual gland removes the sources of extravasation but in case of congenital ranula which is usually a variant of retention cyst should be treated with marsupialisation or simple excision of cyst while cyst excision with sublingual sialadenectomy should be reserved for recurrent cases.

Conclusion

Congenital ranula usually should be considered as retention type of cyst and treated preferentially with marsupialisation or excision of lesion. Sublingual sialadenectomy should be reserved for recurrent cases.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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