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Case Report

SUBLINGUAL RANULA WITH CONCOMITANT SUBMANDIBULAR SIALEDINITIS

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ABSTRACT:

Abstract

A ranula is a mucocele caused by extravasation of the sublingual gland on the floor of the mouth. Ranulas can appear as a translucent bluish swelling. Ranulas can lead to submandibular sialadenitis due to salivary stasis that leads to retrograde seeding of bacterial from oral cavity. Treatment of an intraoral ranula consists of surgical excision, marsupialization with and without packing or currently Intracystic injection therapy with OK-432, streptococcal preparation or botulinum toxin. Here, we present a case report of 9-year-old child who presented with recurrent salivary gland swelling along with sublingual ranula.

Key words: Ranula, Sublingual, Sialadenitis

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INTRODUCTION

A ranula is a mucocele caused by extravasation of the sublingual gland on the floor of the mouth. Ranulas can be induced by pooled mucin from ruptured acini of the sublingual gland or a ruptured duct of Rivinus. Because ranulas are lined with granulation tissue instead of epithelium, they are considered a type of pseudocyst.[1] The gender predilection of oral ranulas slightly favors females, with a male-to-female ratio of 1:1.4, while cervical ranulas have a predilection for males.[2] The name is derived from the latin word Rana which means frogs because it resembles the appearance of Frog's translucent belly.[3] Ranulas are often huge [>2cm] and shaped like a tense fluctuant dome vesicle. The lateral floor of the oral cavity is the most typical location.[4]

Under the tongue, Ranulas superior to mylohyoid muscle appears as a translucent bluish swelling. If it's darker, there aren't any colour changes. Sublingual ranula, plunging ranula, and sublingual plunging ranula are the three forms of ranula used in clinical practice. When mucin fluid pressure dissects through mylohyoid muscle into submandibular region, a plunging ranula is formed.[5]

Ranulas can lead to submandibular sialedinitis due to salivary stasis that leads to retrograde seeding of bacterial from oral cavity. Here we present a case report of 9-year-old child who presented with recurrent salivary gland swelling along with sublingual ranula.

CASE REPORT

A 9-year-old male patient visited to the Department of Oral Medicine and Radiology, H.P Government Dental College, Shimla with the chief complaint of recurrent submandibular salivary gland swelling for 6 months.

Patient was apparently well 6 months back when he first noticed swelling in the submandibular area which was insidious in onset, small in size and gradually enlarged. Swelling was subsided after taking antibiotics from local dentist. The swelling recurred after sometime. Patient also gave history of dryness of mouth. The patient was undernourished. On Extraoral

Examination he was presented with diffuse swelling in the submandibular area with normal color of the overlying skin. On palpation the swelling was erythematous, warm to touch, soft and fluctuant in nature. (Fig 1 and 2) There was no salivary flow from left Wharton's duct after manipulation of left submandibular salivary gland. On the basis of clinical examination provisionally it was diagnosed as left submandibular sialadenitis. Patient was prescribed with systemic amoxiclav and ibuprofen syrup for infection and pian control. Patient was advised for various investigations such as Routine blood investigations (which was within normal limits), Ultrasonography of Bilateral submandibular glands after antibiotic course which revealed multiple hyperechoic and hypoechoic areas in the left submandibular gland suggestive of submandibular sialadenitis. (Fig 5)

On the first follow up after 5-day course of antibiotic swelling subsided. But later after 1 month patient presented with the similar swelling intraorally. Thus along with antibiotics submandibular gland lavage was done with amoxicillin DT and saline and further the patient was planned for Sialography after the infection subsided to know the exact cause of recurrent salivary gland enlargement. Sialography was performed with sialographic cannula and water based dye (Urograffin 76%). It revealed ductal architecture of Left Submandibular Gland showing narrow primary duct with filling defect at hilum. After sialography patient was discharged. (Fig 4) After 1 month patient again reported with similar swelling extra orally as well as intraoral swelling which is well defined, dome shaped, soft, fluctuant and non tender in the floor of mouth suggestive of ranula. (Fig 3) Patient was advised for contrast enhanced MRI in which MRI T2 weighted post contrast sequences showed cystic lesion along the left lateral border of tongue measuring approximately 34x11x27 mm with peripheral enhancement with bilateral submandibular gland normal in size suggestive of Ranula. (Fig 6 and 7) Patient was planned for surgery under General Anaesthesia. Intraoperatively cystic lining of Ranula along with sublingual salivary gland was excised. (Fig 8 and 9) Patient was followed up after 1 week. There were no post operative complications. (Fig 10).

FIG 1

FIG 2

FIG 3

FIG 4

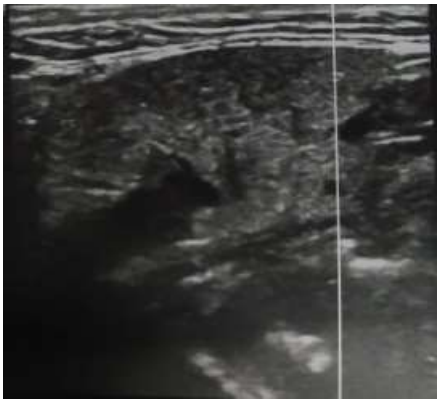

FIG 5

FIG 6

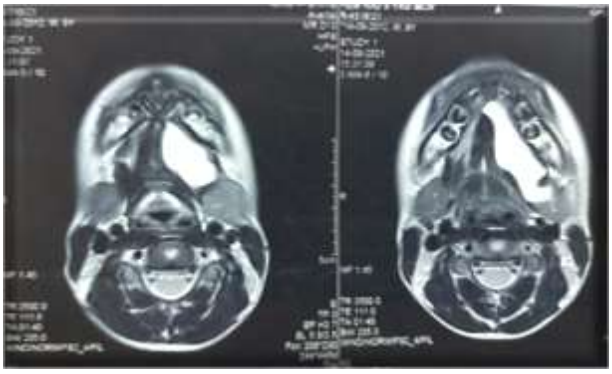

FIG 7

FIG 8

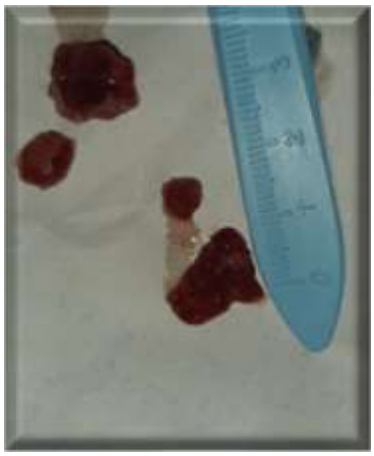

FIG 9

FIG 10

DISCUSSION

Although there are many causes of salivary gland enlargement/swelling such as bacterial or viral sialadenitis, Ranulas, secondary infection due to sialolith. In our case recurrent submandibular sialadenitis posed difficulty in diagnosis. Sialography proved to be boon in diagnosis as it revealed the narrowing of the duct along with filling defect at hilum. This narrow primary duct can either be due to the developmental condition and filling defect of primary duct can be due to the stricture present at hilum or due to any mucous plug deposition which can be the cause of recurrent bacterial submandibular sialadenitis as due to salivary pooling retrograde infection from bacteria from oral cavity cavity can occur. Ranula causes gradual enlargement of the floor of the mouth to form a painless, fluctuant, translucent, dome-shaped swelling, which is said to resemble the underbelly of a frog.[6] There are two different concepts in the pathogenesis of ranula. One is a true cyst formation due to ductal obstruction with an epithelial lining, and the other is a pseudocyst formation due to ductal injury and extravasation of mucus without an epithelial lining. Ranula may also uncommonly present as a rapidly enlarging swelling following infection.[6] Aside from ranula, a number of other lesions may be encountered in the floor of the mouth or submandibular space region. These include congenital abnormalities (cystic hygromas, branchial cysts, and thyroglossal duct cysts), benign lesions (epidermoid cysts, dermoid tumors, and lipomas), malignant neoplasia, and other lesions (abscess, mucocele, and acidosis).[7] The diagnosis of ranula is largely clinical.[8] similarly in our case ranula arise after recurrent submandibular sialadenitis. Ductal stricture/mucous plug can thought to be the cause of salivary flow obstruction. Treatment of an intraoral ranula consists of surgical excision, marsupialization with and without packing or currently Intracystic injection therapy with OK-432, streptococcal preparation or botulinum toxin.[7] Alternatively, the ranula can be treated with the placement of a silk suture or seton into the dome of the cyst.[9] In our case ranula is treated with surgical excision of ranula along with excision of sublingual gland. Patient did not reported recurrence in 6 months follow up period.

CONCLUSION

We reported the association of Ranula with submandibular Sialedenitis along with narrowing of primary duct which was diagnosed due to sialography. This could call for analytic research in the upcoming future looking for possible clinical implications of such

an association and whether this could affect our diagnostic and management plans.

CONFLICTS OF INTEREST

There are no conflicts of interest.

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