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Simultaneous bilateral ranula in an edentulous patient. Rare presentation with a brief review of the literature

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SUMMARY

A ranula is a large mucocele located in the floor of the mouth. Ranulas is usually a mucous extravasation phenomenon due to injury to sublingual salivary gland. unilateral presentation has been reported in many cases but bilateral presentation and that too in an edentulous patient is quite uncommon. This is a case report of bilateral ranula in an edentulous patient and its management along with a brief review of pertinent literature.

Keywords: ranula, bilateral, sublingual gland.

INTRODUCTION

The ranula is an extravasation mucocele that arises from the sublingual gland, either from a ruptured main duct or from ruptured acini following obstruction (1).

The name is derived from the Latin word rana, which means frog, because the swelling may resemble a frog' s translucent underbelly. Like other mucoceles, ranulas may rupture and release their mucin contents, only to re-form (2).

Treatment by incision, simple marsupialization, and excision of the ranula alone have a high recurrence rate, whereas excision of the sublingual gland with or without the ranula is almost always successful (3-5).

Following is a case report that describes simultaneous bilateral presentation of the condition in an elderly edentulous patient which to our knowledge has not been described previously in English language literature.

PERTINENT REVIEW OF LITERATURE

"Ranula is a tumor in that laxe & saufte parte of the mouth, which is under the tongue" wrote Banisterl in his surgical compendium of 1585. The exact origin of the ranula was unknown until toward the end of the nineteenth century, when Suzanne and von Hippel concluded that the ranula arose from the sublingual gland, and recommended removal of the sublingual gland and ranula. Morestin discovered hiatuses in the mylohyoid muscle through which parts of the sublingual gland herniated, and so explained the origin of the plunging ranula from the sublingual gland (1).

The nature of the ranula was unknown until 1956, when Bhaskar *et al.* (7) investigated the pathogenesis histopathologically and experimentally, and concluded that the ranula was produced by extravasation of saliva from a damaged salivary duct and was not lined by epithelium. This knowledge enabled Whitlock and Summersgill (8) in 1962 to treat a plunging ranula with very satisfactory results by removal of the sublingual gland, the source of the extravasation, without the ranula. Attempts were made to develop conservative therapies that avoided total excision of the sublingual gland, and Baurmash (9) in 1992 advocated a modified marsupialization procedure, the rationale of which is based on experimental work in the 1970s by Harrison and Garrett (10-13). They discovered that the extravasated mucus causes an accumulation of macrophages engaged in its removal and the development of granulation and fibrous tissue that restricts and sometimes completely obstructs the extravasation. Thus Baurmash advocated marsupialization and packing the cavity with gauze so that the leak would be immediately obstructed, and the foreign-body reaction provoked by the gauze would lead to fibrosis and a permanent seal. Another successful conservative approach, recently developed by McGurk *et al.* (14) took into account the detailed anatomy of

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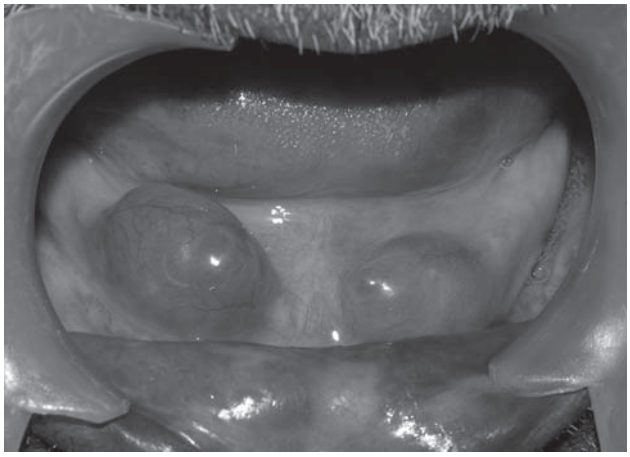

Fig. 1. Initial clinical presentation

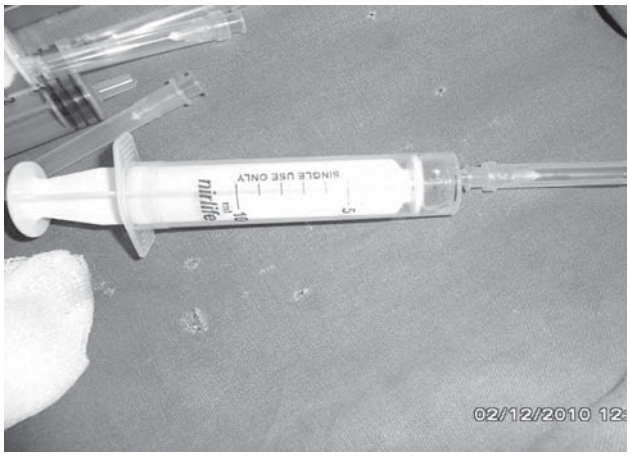

Fig. 2. Aspirate from lesion

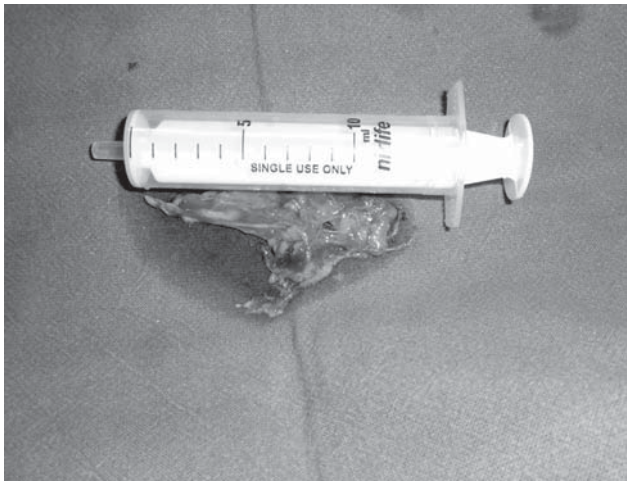

Fig. 3. Excised right and left side sublingual glands

the sublingual gland and involved excision of the ranula following paracentesis and the part of the sublingual gland from which it arose.

CASE REPORT

A 65 year old male was referred by his general dental practitioner for management of swelling present beneath the tongue for about 3 months.

The swelling was very slowly increasing and otherwise asymptomatic. He first noted swelling on left followed approximately a fortnight later by swelling on the right. There was no history of trauma or surgical procedure to the area.

The past medical history was not contributory.

General examination was unremarkable and vital parameters were within normal limits.

Intra-orally, two different swellings were noted in floor of mouth one on either side of lingual frenum.(Figure 1) Overlying mucosa was bluish in color and appeared thinned out. Swelling on right side was about 3×2 cm and the one on the left side was 2×2 cm. both the arches were edentulous. However patient was not wearing a complete denture. Rest of the intra and extra-oral examination did not reveal any abnormality.

Needle aspiration of swelling revealed clear stringy mucus like fluid which strongly suggested salivary origin, that is mucous extravasations phenomenon.

A decision was made to excise both the sublingual salivary glands which is the current recommended treatment. Under general anesthesia, the sac was emptied by aspiration for ease of access. Wharton's duct was cannulated to avoid injury to it. As the patient was edentulous, crestal incision was made from approx. first molar region on one side to the other.

Flap was raised. The gland was identified and dissected out from Wharton's duct medially, and lingual nerve posteriorly. Anteriorly, it was separated from the other gland close to midline .laterally it was separated from lingual periosteum of mandible. Similar procedure was done on the other side. Hemostasis was achieved and incision was close with 3-0 vicryl (Figures 2-5).

Post-operative course was uneventful. Till date, there is no recurrence (Figure 6).

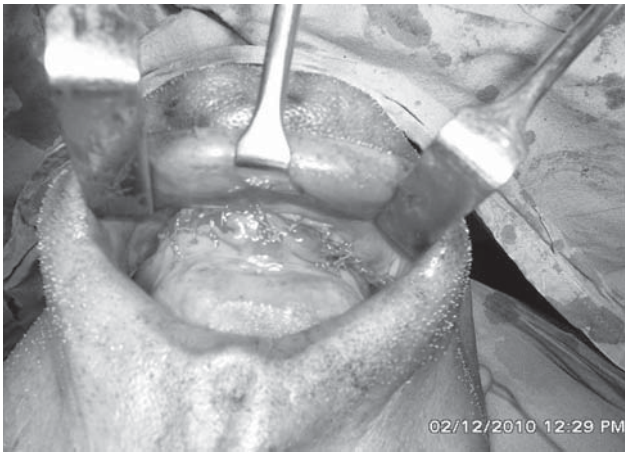

Fig. 4. Closure

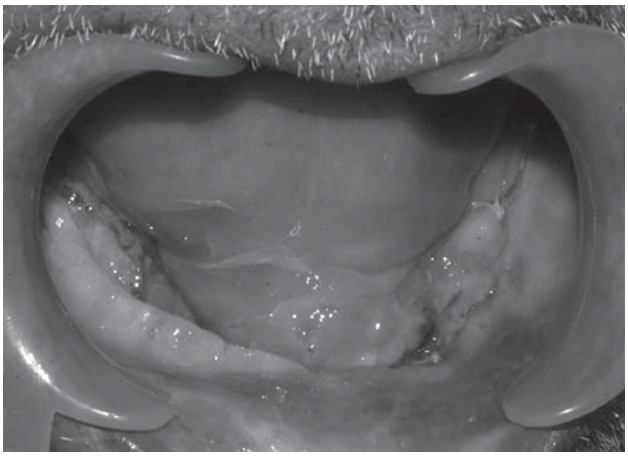

Fig. 5. Follow up at 3 weeks

DISCUSSION

Bilateral presentation coupled with characteristic clinical appearance helped us to distinguish the lesion from other floor of the mouth lesions like dermoid cyst, cystic hygroma, neoplasm of minor salivary gland.

Etiology of the condition could not be determined in present case. Patient was edentulous but not wearing a denture hence ill fitting denture as the cause was ruled out.

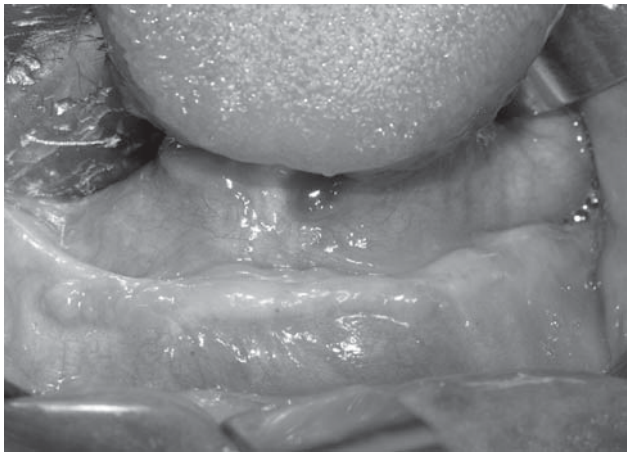

Fig. 6. Follow up at 5 years

Simultaneous bilateral clinical presentation of ranula is quite uncommon. In the largest clinical review of the condition reported in english literature, out of 580 ranulas only 3 occurred simultaneously (3).

Surgical intervention is the treatment of choice for ranulas. There is enough evidence in literature to suggest that excision of the sublingual gland results in definitive cure unlike marsupialization which has a high recurrence rate. Frequency of recurrence is related to the surgical technique selected (marsupialization, 67%; ranula excision, 58%; sublingual gland excision, 1%), and given these results, excision of the lesion and the gland should be considered (7).

CONCLUSION

Ranula can occur even in an elderly patient without an obvious cause. Excision of sublingual salivary gland offers curative treatment.

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