

CASE REPORT

SURGICAL MANAGEMENT OF RANULA : A CASE REPORT

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ABSTRACT

Ranula is a retention cyst of the sublingual gland, which enlarges progressively and extends into the surrounding soft tissues¹. We report a case of oral ranula involving the floor of mouth treated successfully by surgical excision following detailed clinical examination, radiological interpretation and histopathological diagnosis. The patient was followed up on a regular basis and was disease free.

Keywords: Ranula, Sublingual gland, pseudocyst.

INTRODUCTION

Ranula refers to a collection of extra-glandular and extraductal saliva in the floor of the mouth originating from the sublingual salivary gland. It may rarely originate from injury to the submandibular gland (SMG) duct². It is a pseudocyst, as it does not contain an epithelial lining. It classically presents as a soft submucosal swelling in the floor of the mouth. The term ranula originates from the Latin word for frog (rana) as the cyst is said to look like the underbelly of a frog.

Ranula was first described by Hippocrates. Clinically ranula is of three types. Most common of which is the "Sublingual ranula" which presents as an intraoral sublingual swelling. The second commonest is the "Plunging ranula" which is located cervically and extend beyond mylohyoid muscle, and those having both cervical and oral component is known as "sublingual plunging ranula"³. It has an unknown etiology but it may be seen in association with congenital anomalies, trauma, and disease of sublingual gland⁴.

CASE REPORT

A 30 year old male patient reported to a private dental clinic at Kodaly, Thrissur, with a chief complaint of swelling in relation to right floor of the mouth with a history of two weeks duration. On clinical examination, intraorally there was a 2.5cm *2.5 cm swelling in relation to right floor of the mouth. The swelling had smooth and regular margins and was non tender on palpation (fig1).



Fig 1

An intra oral radiograph was taken to rule out any bony involvement with the lesion. The mucosa is incised over the ranula taking care not to enter the sac. A submucosal dissection plane is established over the wall of the ranula. Using sharp and blunt dissection, the cyst is excised, taking care not to injure the submandibular duct or the lingual nerve (fig 3). A portion of sublingual salivary gland was excised to avoid the chances of recurrences (fig 2). After proper irrigation the wound was sutured (fig 4). The patient was kept on periodic follow up and the wound healed uneventfully (fig 5).

INTRA - OPERATIVE PHOTOS



Fig 2



Fig 3



Fig 4



Fig 5

The specimen was sent for histopathological examination and the lesion was reported as Ranula.

DISCUSSION

Ranula appears as tense, dome-shaped vesicle, which is fluctuant and characterized by size larger than 2 cm and sometimes may present with a bluish hue. It accounts for around 6% of oral sialocysts and its prevalence is around 0.2 cases of 1000. Out of all the cases diagnosed as ranula only 1 - 10% are truly retention cysts⁵. The peak age of occurrence of ranula is second decade and normally found in children and also young adults.

Two theories have been proposed regarding the development of ranula. According to the first theory it develops as a consequence of mucus extravasation, whereas the second theory proposes mucus retention, both due to rupture or damage of a duct of salivary gland⁶. But the current review and opinions support mucus extravasation secondary to developmental factor as ranula are devoid of lining epithelium.

Sometimes ranula may mimic some benign and malignant lesions, so the clinical diagnosis of ranula is very important. The differential diagnosis of all the clinical types of ranula includes inflammatory, neoplastic lesions of major salivary glands except the parotid gland, of the lymph nodes, granulomatous diseases, diseases of the adipose tissue, thyroglossal duct cysts, cystic hygroma, dermoid, epidermoid cysts and laryngocele⁷.

No specific diagnostic tests are there for ranula. At times it present as a cystic fluctuant lesion, which gradually increases in size with time. The fluid contents of ranula are composed of salivary amylase and protein in higher contents when compared to serum. This indicated that ranula originates from sublingual gland as it produces highly protein saliva in contrast to submandibular gland.

Histopathologically, ranula consists of a central cystic space, which contains mucin and a pseudocyst wall and is composed of loose and vascularized connective tissues. Predominantly there is presence of histocytes within the pseudocyst wall, which decrease in number over a period of time⁸. There is absence of epithelial tissues in the wall of ranula. A histopathological examination of the cystic wall is mandatory, to rule out the presence of malignant carcinoma arising from the cyst wall and papillary cystadenocarcinoma of the sublingual gland, which may mimic ranula.

There are several different methods for the treatment of ranula. These include excision of the lesion via an intraoral or cervical approach, marsupialisation, intra oral excision of the sublingual gland and drainage and excision along with sublingual gland⁹.

The recurrence rate with the various treatments was 100% in cases of incision and drainage, 61% in cases of simple marsupialization, and 0% in the case of Enucleation of the ranula with or without sublingual gland excision Surgical excision is best treatment for ranula¹⁰.

CONCLUSION

This case report suggested that a combined clinical, radiographic and perioperative findings play an important role for selection of different surgical procedures in the management of ranula. No morbidity, no recurrence and good patient tolerance was noted for this procedure. We concluded that partial sublingual glandectomy with excision of the ranula is a good conservative treatment option for the management of simple intra oral sublingual ranula.

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