

## Surgical Management of an Oral Ranula in a Pre-schooler

Case Report

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### Abstract

Ranula is a mucous extravasation cyst which occurs in the floor of the mouth as a result of trauma or obstruction of the sublingual or minor salivary gland or the duct itself. Ranula occurring in a pre-schooler is a rare entity. There are many methods in the literature for the treatment of ranulas including excision of the ranula only, excision of the ranula and the ipsilateral sublingual gland, marsupialisation and cryosurgery. This case report discusses the surgical excision of an oral ranula in a pre-schooler along with the sublingual gland.

**Keywords:** Ranula; Pediatric; Excision; Sublingual Gland.

### Background

The term ranula is derived from the Latin word “rana” and is descriptive of the blue, translucent swelling in the floor of mouth, which is said to resemble the underbelly of a frog. Ranulas may be simple or plunging. [1, 2] A simple ranula can be either a mucus retention cyst or more commonly a mucus extravasation pseudocyst, which is confined to the floor of the mouth. A plunging or cervical ranula is a mucus extravasation pseudocyst arising from the sublingual gland and presents as a swelling in the neck. [3]

A ranula is relatively painless or asymptomatic with little or no associated morbidity or mortality but if the size is large, it may interfere with deglutition, speech, mastication or breathing. [4] Literature on managing pediatric oral ranulas state that incision followed by drainage frequently causes recurrence because of the early closure of the incised portion [5], persistent extravasation of sublingual gland and without the development of granulation and fibrous tissue that obstructs the extravasation. [6, 7] This report summarises the management of a pediatric oral ranula by a transoral excision of the ranula along with the sublingual gland.

### Case Report

A 4 year old female child reported with a complaint of a swelling on the right side below the tongue for the past 5 months. The parent gives a history of a swelling which would tend to enlarge and then spontaneously drain into the mouth having a salty taste with recurrence every 2 weeks. She also described difficulty in swallowing & moving her tongue when the swelling would enlarge. There was no history of trauma, infection, or known precipitating factors. On examination there was a 2 cm ovoid swelling in the right floor of mouth which was bluish grey in colour (Fig 1). On palpation the swelling was soft and non-tender. A presumptive diagnosis of a ranula was made. Considering the age of the child and the invasive procedure planned, the treatment was planned under general anaesthesia. A transoral excision of the mass and sublingual gland was performed. The lingual nerve was identified to permit complete removal of the right sublingual gland and its excision was done (Fig 2). The mucosal incisions were reapproximated and sutured with absorbable sutures. The excised tissue was sent for histopathological examination which showed histio-

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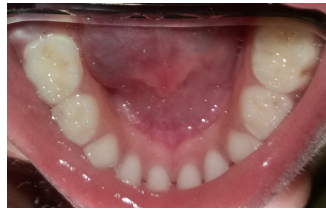
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**Figure 1. Intraoral Preop Ranula.****Figure 2. Excision of Sublingual Gland.****Figure 3. 1 week Post Op Image.**

cytes in the cystic spaces and a wall composed of vascularized connective tissue. The patient had an uneventful postoperative course with no complications and recurrence over 6 months.

## Discussion

Although the standard treatment of ranula still remains controversial, [8] a variety of surgical procedures have been quoted in the literature ranging from simple aspiration to complete or partial excision of the ranula and/or the sublingual salivary gland, at times involving the submandibular salivary gland. [9] They include: marsupialisation, dissection, cryotherapy, sclerotherapy, hydro dissection and LASER ablation.

The recurrence rate varies according to the procedure performed. [8] Yoshimura et al compared 3 methods of ranula treatment in 27 patients, with a recurrence rate of 25% while excising the ranula only, 36% with marsupialization, and 0% with ranula and ipsilateral sublingual gland excision. [5] In the present case, excision of the ranula was done along with the ipsilateral sublingual gland excision. Crysdale et al reported that the incidence of recurrence after conventional marsupialization of ranulas or pseudo cysts of the oral floor was in the range 61-89 % and so lesions larger than 1 cm should be treated by excision of the sublingual gland. [10] Pandit RT et al [2] showed a 95.5% success rate in the treatment of ranulas by sublingual gland excision with no long-term complications. Bridger et al., suggested this treatment for all ranulas by excising the sublingual gland regardless of their size. [11]

It has been reported that removal of the ipsilateral sublingual gland has potential morbidity, most notably, injury to the lingual nerve with subsequent numbness, injury to Wharton's duct with

the possibility of obstructive sialadenitis, and ductal laceration causing salivary leakage. [12]

## Conclusion

Excision of both simple and plunging ranulas along with the sublingual gland can be considered as a safe and effective treatment option. In the present case recurrence of the ranula did not occur even after 6 months. Hence the removal of the sublingual gland can prevent recurrence by removing the origin of the ranula.

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