

# Management of ranulas

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## Summary

A ranula is an epithelial lined cyst located in the floor of the mouth, which is usually related to the sublingual salivary glands. Ranulas may cause severe symptoms like dyspnea and/or dysphagia which may require emergency aspiration or excision. Eleven children aged between 2 days and 13 years, whom had 10 simple and 1 deep "plunging" ranulas were presented, regarding their characteristics and management. Emergency aspirations were needed in 5 babies because of dyspnea and dysphagia. Operative treatment was marsupialization in 9 and marsupialization with sublingual excision in 1 patient, and total excision in 1 patient. Results were satisfactory in all patients without complications such as infection or recurrence after 3-7 years follow-up postoperatively.

**Key words:** Ranula, plunging ranula

## Introduction

A ranula is a bluish, transparent, thin walled swelling in the floor of the mouth. If the intraoral swelling is accompanied by a submaxillary, cervical and parapharyngeal extension, the term "plunging ranula" is often used. Generally, the patients present with mild symptoms, but some patients may have severe symptoms like dyspnea and/or dysphagia due to compression of the cystic mass to the oropharynx (1,3-8).

## Material and Methods

Eleven children, 7 males and 4 females, aged between 2 days and 13 years admitted to our department with complaints of a ranula. The age, sex, size, types and symptoms of ranulas in 11 children are shown in Table 1. Five babies, had dyspnea and dysphagia due to the compression by the intraoral cystic mass. A 13 years old child had a ranula with a

cervical extension (plunging ranula) and all other patients had simple ranulas.

The size range of the cysts was between 0.5-4 cm. In five babies, cysts required aspiration in order to reduce the compression of the cystic mass and to relieve dyspnea and dysphagia. Operative procedures applied were marsupialization of the cystic cavity to the floor of the mouth in 9 cases, marsupialization with sublingual excision of cervical extension in 1 patient, and total excision in 1 patient. Lingual and sublingual edema were the only postoperative complications which usually disappeared within 3-5 days.

## Results

Patients were followed up 3-7 years postoperatively, there were no infections or recurrences. Postoperative results were satisfactory in all patients.

## Discussion

A simple ranula is thought to occur after a partial obstruction of the sublingual salivary duct leading to dilatation of the more proximal duct. The epithelial lined cyst is usually connected to the sublingual gland. Obstruction of the sublingual duct sometimes

Table 1. The age, sex, size, type and symptoms of ranulas in 11 children

No	Age	Sex	Size	Type	Symptoms
1	3 years	M	2x1x1	Simple	Sublingual mass
2	4 years	M	3x2x1	Simple	Sublingual mass
3	13 years	F	4x4x4	Simple	Sublingual mass
4	6 years	F	2x1x1	Plunging	Submental mass
5	1 month	M	3x3x2	Simple	Sublingual mass
6	2 days	M	2x2x1	Simple	Dyspnea/Dysphagia
7	4 days	M	2x2x2	Simple	Dyspnea
8	8 months	F	3x2x2	Simple	Dyspnea
9	11 months	F	1x1x1	Simple	Dyspnea/Dysphagia
10	15 days	M	3x3x2	Simple	Sublingual mass
11	9 years	M	4x2.5x2	Simple	Dyspnea/Dysphagia
					Sublingual mass

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leads to rupture of the duct with oozing of amylase containing salivary secretion, producing a pseudocyst with no epithelial lining. It may extend through the submental muscles and into the neck, therefore called "plunging ranula" (2,5-8).

Ranulas may interfere with tongue movements as well as swallowing and breathing. Dyspnea is an alarming symptom which must be relieved by reducing the size of the cystic mass by aspiration or emergency excision (8). Emergency aspiration of ranulas were performed in 5 of our babies. This procedure is also required to ease the intubation for anesthesia in two cases.

The plunging or deep ranulas are less common (5-8). They may be confused with thyroglossal duct cysts. The plunging ranulas and thyroglossal duct cysts are farther back, more embedded in the tongue and less cystic than simple ranulas.

Plunging ranulas may be in close proximity to the hypoglossal, lingual and mandibular branches of the facial nerve; therefore, utmost care should be taken during dissection of a plunging ranula (2,5-8). Ranulas are entirely benign lesions. Most authors suggest

a marsupialization procedure for the treatment of ranulas (1,2,4,5-8).

In conclusion, necessity of emergency aspiration of ranulas especially in neonates with obstructive symptoms should be kept in mind and utmost care should be taken during dissection of a plunging ranulas.

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