



Ranula Oral: About Two Clinical Cases

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Abstract

Objectives: We report 02 clinical cases of ranula through these cases we will describe the etiopathogenesis, diagnosis and therapeutic aspect of ranula.

Cas Report: These are two patients aged 30 years and 20 years old, both females, who all consulted the otolaryngology and head and neck surgery department of the Gabriel Toure University Hospital in Bamako for sublingual swelling. Ultrasound was performed on the first patient while the second disc performed a CT scan. These examinations made it possible to confirm the fluid content of the mass. Surgical excision of the ranula was carried out in both patients. The aftermath was simple and we have had no recurrences after 12 months of monitoring.

Conclusion: Ranula is a sublingual cystic lesion whose etiology remains to be discussed. Several hypotheses have been posed (congenital predisposition, inflammation, trauma, anatomical variations). Surgical excision of the ranula remains the standard treatment because this rate of recurrence is the lowest compared to other treatments.

Keywords: Ranula; Marsupialization; Sclerotherapy

Introduction

A ranula is a cystic lesion that arises from the sublingual gland and is one of the most common intraoral salivary gland masses. The term ranula is derived from the Latin word rana, meaning frog. Reminiscent of a frog's belly, a ranula classically appears as a translucent swelling in the floor of the mouth [1]. According to a report from A. Gupta University in India, the prevalence of ranulas is 0.2 cases per 1000 people, which accounts for 6% of all salivary gland cysts [2]. Types of ranula are the sublingual (intraoral) ranula, plunging (cervical) ranula and mixed ranula depending on their extent. The reliability of the diagnosis of ranula relies primarily on clinical signs, but sometimes imaging (ultrasound, CT scan, MRI) and fine needle aspiration are used for the diagnosis of ranula particularly in pediatric patients [3]. Various treatments for ranula have been suggested, and each treatment has shown a different success rate. We are going to report to you two cases of simple ranula treated by surgery in the ear nose throat department of the Gabriel Toure University Hospital.

Case Series

Case 1

This was a 30-year-old patient with no known medical-surgical history who consulted the otolaryngology and head and neck surgery department of the Gabriel Toure University Hospital in Bamako for a sublingual swelling that had been evolving for 03 years associated with a rhinolalia without notion of infectious syndrome, trauma, the physical examination found a sublingual swelling measuring 6 cm × 5 cm of soft consistency regular contours mobile, not painful on palpation pushing the tongue upwards and backwards preventing us from seeing the oropharynx. An ultrasound carried out revealed an anechoic collection at the sublingual level measuring approximately 43 × 35 × 34 or 25 cc. Surgical excision of the mass was successfully performed intraorally under general anesthesia. There were no incidents or accidents. The immediate aftermath of the operation was simple. The complete scar was obtained 2 weeks later. Histology did not reveal any signs of malignancy (Figures 1-3).

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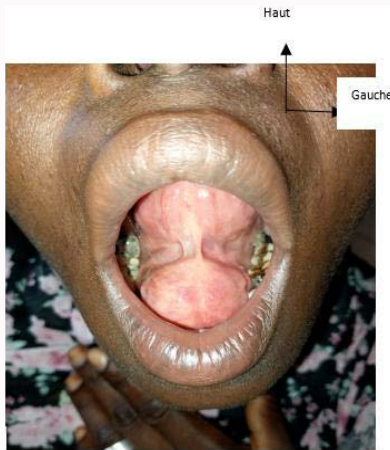


Figure 1: Image showing oral ranula.

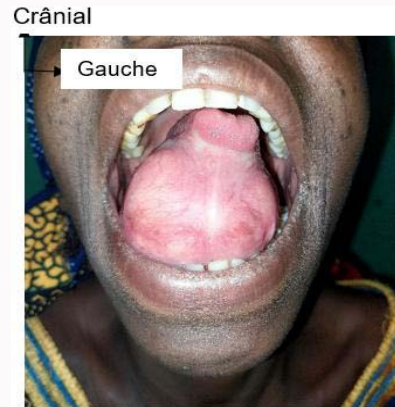


Figure 4: Image of sublingual ranula taking pushing tongue up and back.



Figure 2: Ultrasound image highlighting an anechoic collection at the sublingual level.

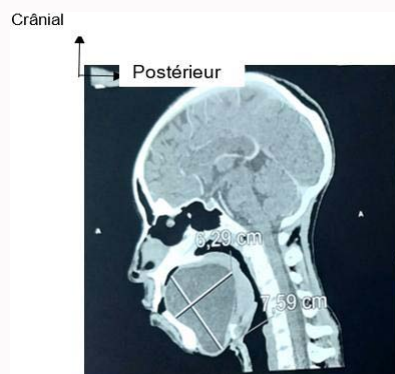


Figure 5: Scan image of the facial mass, sagittal section showing a sublingual cyst.



Figure 3: Image highlighting the surgical part of the ranula.



Figure 6: Image of the operating room.

Case 2

This was a 20-year-old patient with no known medical-surgical history who consulted the otolaryngology and head and neck surgery department of the Gabriel Toure University Hospital in Bamako for swelling under lingual evolving for 07 years without notion of infectious syndrome or trauma. The evolution was marked by the addition of respiratory disorders to sleep (snoring, nocturnal awakenings) dysarthria, the physical examination found a sublingual swelling measuring (Figures 4-7) 6 cm × 5 cm of soft consistency with regular mobile contours, not painful on palpation pushing the tongue upwards and backwards preventing us from seeing the oropharynx. A CT scan revealed a cystic mass measuring approximately 6.3 cm

× 4.4 cm at the sublingual level. Surgical excision of the mass was successfully performed intraorally under general anesthesia. There were no incidents or accidents. The immediate aftermath of the operation was simple. The complete scar was obtained 2 weeks later. Histology did not reveal any signs of malignancy.

Discussion

The most common lesion of the sublingual gland is ranula, which can be considered a mucocele of the sublingual salivary gland [3]. Ranulas can be classified into three groups: Oral ranulas present only sublingual swelling, while a dipping or cervical ranula presents cervical swelling without swelling of the floor of the mouth. A mixed ranula presents with both intraoral and cervical swelling [4]. Sublingual



Figure 7: Image after excision of the cyst.

ranula is much more common than plunging or cervical ranula [5]. Our two cases were sublingual ranula. Oral ranulas are more common in children and young adults [2]. Our two cases were oral ranula and they were young adults: 20 and 30 years old. A study affirms the predominance of women (71%) compared to men (29%) with a ratio of 2.4/1 [2]. Both of ours were female. Since ancient times, several theories have been proposed regarding the origin and pathogenesis of ranula [6]. Ranulas result from mucus retention in the ductal system of the sublingual gland or extravasation of mucus following ductal rupture caused by inflammation or trauma [3,6]. The precise etiology of ranulas remains to be proven, but a congenital predisposition has been suggested, given the predominance of plunging ranulas in people of Asian origin. We had no notion of ranula in the family nor any notion of trauma in our two patients. In 2014, Mun et al. suggested that anatomical variation in the ductal system of the sublingual gland could be a possible cause of ranulas [3]. Plunging ranulas are thought to occur secondary to congenital dehiscence of the mylohyoid muscle which allows herniation of a portion of the sublingual gland or pseudo cystic sac into the submandibular space or posterior extension between the mylohyoid muscle and the muscles hyoglossus where there is no fascial limit [1]. A complete history and physical examination are the cornerstone of the evaluation of intraoral and cervical masses. Imaging (ultrasound, computed tomography and magnetic resonance imaging) can be used as an adjunct to diagnosis and surgical planning. The differential diagnosis of an intraoral ranula includes foregut duplication cysts, lymphatic malformations, and dermoid. The differential diagnosis of a plunging ranula is broader and includes thyroglossal duct cyst, branchial cleft cyst, epidermoid cyst, laryngocele and lymphatic or vascular malformations, and solid neck masses such as lipomas, dermoid, submandibular gland neoplasms and lymphadenopathy [1]. Various treatments for ranulas have been suggested. These include sclerotherapy with OK-432, marsupialization, excision of the ranula only or with the gland [1,4].

OK-432 (Picibanil 1) is a lyophilized mixture of low virulence group A *Streptococcus pyogenes* and penicillin G, which was initially developed as an immunotherapeutic agent for cancer patients. Thus, it was hypothesized that plunging ranula could be effectively treated with primary sclerotherapy OK-432 [5]. Marsupialization is a relatively crude minimally invasive procedure where the bottom of the ranula cavity and the oral mucosa are subjected to treatment to establish continuity by removing the cyst wall and suturing the cyst boundary with the oral mucosa [6]. Simple oral ranulas are extirpated through an intraoral approach. For plunging ranulas, excision can be done intraorally or cervically. Excision of the ipsilateral sublingual gland is important in both approaches to prevent recurrence [1]. In our two cases we proceeded with surgical excision with preservation of the gland orally. Recurrence rates are variable but exceed 50% for any surgical procedure in which the sublingual gland is not excised. The recurrence rate can be as high as 70% with incision and drainage of the cyst alone and 53% with marsupialization. Regardless of complete excision of the cyst wall, excision of the sublingual gland gives a recurrence rate of less than 2% [1]. We did not note any recurrence among our two cases after 1 year of surveillance.

Conclusion

The ranula is a sublingual cystic lesion whose etiology remains to be discussed. Several hypotheses have been posed (congenital predisposition, inflammation, trauma, anatomical variations). There are two types: sublingual or intraoral and plunging or cervical. Surgical excision of the ranula remains the standard treatment with the lowest recurrence rate compared to other treatments.

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