CASE REPORT

Ranula – A Case Report

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Abstract:

The term ranula is derived from a latin word "rana" which means "frog." Ranula is a mucous containing swelling that occurs in the floor of the mouth. It usually presents as a well circumscribed, soft, bluish swelling covered by a thin layer of epithelium. This article presents a case of simple ranula in seven year old female patient treated with excision of sublingual gland.

Keywords: Ranula, Sublingual Gland, Floor of The Mouth

Introduction

Ranula is a mucous containing swelling that occurs in the floor of the mouth. It usually presents as a well circumscribed, soft, bluish swelling covered by a thin layer of epithelium [1]. Ranula can be classified into two types, simple (intra oral) and the plunging (cervical) type. A simple ranula represents a localised collection of mucous within the floor of the mouth and is the more common type than plunging type. In plunging ranula, the mucous collection is in the submandibular and submental spaces of the neck with or without an associated intraoral collection [1].This article presents a case of simple ranula in seven year old female patient treated with excision of sublingual gland.

Case Report

A seven year old female patient reported to the outpatient Department of Oral Medicine & Radiology with a chief complaints of pain and swelling below the tongue on the right side, for the past two months. History revealed that the swelling has gradually increased in size to the present size and was associated with intermittent pain and difficulty in chewing and talking. Family history and personal history and previous history of swelling were noncontributory.

Extra oral examination did not reveal any siginificant findings. On examination, general condition was good and vital signs were stable. Intra oral examination showed solitary bluish swelling measuring about 2x 2 cm, in the floor of the mouth on right side, extending from midline to lingual side of the alveolar ridge, anteriorly up to the mesial aspect of 43, posteriorly up to 46,47 region. The swelling was non-tender, soft in consistency and no discharge was elicited (Fig. 1).

Fig. 1: Intraoral Photograph Showing Swelling on Right Side of Floor of Mouth

Based on history and clinical features provisional diagnosis of "ranula" was considered. A differential diagnosis of Mucocele of Wharton's duct, Lingual varicosities (A-V malformation) were considered.

Radiographic examination with mandibular occlusal radiograph showed no abnormal changes. Ductal patency was checked by injecting the urografin dye directly in to the sublingual gland under local anesthesia (Fig. 2).

Fig. 2: Photograph Showing Injection of Contrast Media to Swelling

After injection of urografin, mandibular occlusal radiograph was taken, which showed a well defined round radiopacity measuring about 1,5 x 1 cm in size near the ductal opening of sublingual gland, suggestive of uptake of the material by the gland with absence of calculi (Fig. 2, 3 & 4).

Fig. 3: Mandibular Cross Sectional Occlusal Radiograph Showing Uptake of Urograffin Contrast Media by the Sublingual Gland

Fig. 4: Lateral Oblique View of Mandible Showing No Calcifications

Right lateral oblique radiograph showed no evidence of calcification. Ultrasound report showed a small cystic area measuring 1 cm to the right lingual fossa suggestive of Ranula. Treatment of excision of ranula along with the sublingual gland was carried out under local anaesthesia and sutures were placed. Patient was recalled after five days and sutures were removed and surgical site showed satisfactory healing (Fig. 5). Patient follow up was done for six months with no recurrence.

Fig. 5: Post Operative Photograph Showing Satisfactory Healing

Discussion:

Ranula is derived from a latin word "rana" which means "frog." The swelling resembles a frog's translucent underbelly or air sacs. Ranulas are characteristically large (>2 cm) and appear as a tense fluctuant dome-shaped vesicle, sometimes with a blue hue. Ranulas originate from the extravasation and accumulation of saliva from the sublingual gland. If a salivary duct is obstructed, secretory back-pressure builds leading to a duct rupture with mucus being forced into the surrounding tissues. A cervical ranula or plunging ranula occurs when the fluid pressure of the mucin dissects through a perforation in the mylohyoid muscle in the submandibular space [3-5].

Pathogenesis of ranula was investigated by Bhaskar *et al* [6] histopathologically and experimentally, and they concluded that ranula was produced by the extravasation of saliva from a damaged salivary sublingual gland and was not lined by epithelium. The occurrence of ranula is rare, and the reported male-to-female ratio is 1: 1.3, without significant side preference [7]. Ranula commonly occurs unilaterally, and bilateral ranulas are extremely rare, although rarely reported in literature. Clinically it appears as bluish, fairly well-circumscribed, soft, painless, fluid-containing intraoral swelling. Most of the patients usually present with a gradually enlarging swelling of the floor of the mouth with or without pain. Ranulas usually occur in children and young adults, with the peak frequency in the second decade [2]. The cervical variant tends to occur a little later in the third decade.

The diagnosis of ranula is based principally on the clinical examination although computerized tomographic or magnetic resonance imaging used in plunging lesion. If there is a doubt about the diagnosis, aspiration of the mucous from the lesion and a laboratory determination of amylase content should make the diagnosis of ranula obvious [2].

A variety of treatment modalities have been proposed for ranula, including incision and drainage, marsupialization, irradiation, injection of sclerosing agents, cyst extripation, and excision of the sublingual gland with the lesion [2, 8-10]. Other treatments include injection of botulinum toxin type A to treat ranulas [11]. Recurrence of ranula depends on treatment type; Crysdale *et al* [12] reported that the recurrence rate was 100% in cases with incision and drainage, 61% in cases of simple marsupialization, and 0% in cases of excision of the ranula with or without sublingual gland excision. In the present case excision of sublingual gland along with ranula was carried out and patient follow up was done

for six months with no recurrence. The effective treatment of salivary gland disorders requires accurate diagnosis of the specific disease. Newer advancements in the field of imaging, aid the clinician in making a proper diagnosis and treating them.

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