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Management of Ranula with Modified Marsupialization Technique

Dr Deepu Chandran

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ABSTRACT: The aim of this study was to evaluate the efficacy of a modified technique of marsupialisation in managing ranula. Many techniques have been implemented in managing mucous retention cysts of the oral cavity located on the floor of the mouth. These lesions are normally referred to as ranula. Due to its high chance of recurrence, older methods of curettage or excision of the lesion is not recommended nowadays. Marsupialization is the most recommended technique for managing these types of lesions. In this study we employed packing inside the cavity of the lesion, and continued till the size of the cavity reduced in size.

Keywords : Ranula, Mucous retention cyst, mucocele, Marsupialization

I. INTRODUCTION

Mucous retention cysts of Ranula type commonly occur in the floor of the mouth and are characterized by their frog belly shape and bluish color[1]. It is usually a pseudocyst which results from trauma and/or obstruction of the excretory duct of the salivary gland due to anatomical variation, located in the submandibular or sublingual space and also chronic diseases of the sublingual gland[2-4]. Ranulas are usually two types. It can be either superficial or deep. The deep type is also known as the plunging ranula. The simple superficial ranula typically is confined to the floor of the mouth and presents between the 2nd and 3rd decades of life[5]. Plunging ranula occurs when the mucous content traverses through the mylohyoid muscle into the submandibular space and beyond [6].

II. CASE REPORT

A 31-year-old male patient reported to the Department of Oral and Maxillofacial Surgery with a chief complaint of swelling under the tongue for 2 weeks. The patient gave a history of the swelling, which revealed that the swelling was initially small in size and progressed to its current state. He started noticing it as a small lump below the tongue, which was a discomfort for the patient. He was not associated with any relevant medical/dental history. No history of allergies was also reported. Intra-orally, a small swelling of size 1 x 0.5 cm was seen corresponding to the region of 43,44 and 45 teeth region (fig.1). No change in color over the swelling was noted. The swelling was non-tender, soft and fluctuant. Radiographic investigations showed negative for calculi in doubtful sialolithiasis condition. The patient was advised marsupialization of the swelling followed by packing with povidone-iodine till the size of the lesion was reduced gradually.

III. SURGICAL PROCEDURE

A pre-operative assessment was done for the patient for fitness prior to the procedure. The surgery was planned under local anaesthesia(2% 1:2,00,000 Lignocaine). Disinfection of the area was done with 0.1% povidone-iodine solution. Topical anaesthesia was given, and lingual infiltration was performed for complete lingual anaesthesia around the ranula. A cross incision was placed over the swelling, and a flap was raised to reveal the mucous contents of the lesion. The cavity was not lined and, therefore, only flushed with disinfectant to remove all the mucous contents. The flaps were then sutured to the outer epithelium, and the cavity was packed with povidone-iodine-soaked gauze (Fig.2). The packing was changed every 3 days until the cavity reduced in size. The patient is currently asymptomatic for 6 months.

IV. DISCUSSION

Numerous methods have been depicted over the years for managing ranulas, and a gold stand treatment protocol is yet to be defined. While some treatments aim at achieving a therapeutic effect, others aim to reduce the complications, considering the fact that most of the time, these lesions occur in a highly vascular area[8]. Treatment options ranged from sclerotherapy, incision drainage, excision of the lesion and also removal of the salivary gland[8,9]. Marsupialisation remains the ideal choice of treatment to date, with several modifications [10]. A recent study by Aluko et al showed that decompressing the suture by stitch and stab technique had better results and did not require any retreatments [11]. Zhao et al., in their study of

580 lesions, determined that the recurrence rate of ranulas is closely linked to the surgical technique used for treatment. They found that simple incision and drainage of oral ranulas result in recurrence rates as high as 100%, whereas marsupialization yields significantly lower failure rates. This suggests that the effectiveness of the surgical method in ensuring the patency of the cut slit over several weeks plays a crucial role in achieving successful outcomes [12]. Since the decompression technique poses risk of all contents not being drained in lesions with deeper locules, we feel that the risk of retreatment would be higher considering its blind nature of technique. Although the study have to be conducted on a larger group, it is a promising technique in recurrent cases before sialoadenectomy.

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FIG 1

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FIG 2