



RANULA AND ITS MANAGEMENT – A CASE REPORT.

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ABSTRACT

Ranulas are mucus-contained swellings, known as Mucoceles, which usually occur on the floor of the mouth. The term Ranula is a Latin derived from the word "Rana" which means frog and since these swellings resemble the belly of a frog, they are known as Ranulas. This article presents a case of simple ranula in a 30-year-old Male patient treated with Marsupialization.

KEYWORDS : Ranula, Mucocele, Diode laser, marsupialization.

CASE REPORT

A 30-year-old Male patient reported to our department with the chief complaint of swelling in the floor of the mouth since 5 days. The patient was apparently asymptomatic 5 days before, after which he noticed an ovoid-shaped swelling, that was painless, sudden in onset with no history of trauma. He visited a nearby govt hospital 2 days after and was prescribed antibiotics such as Amoxicillin 500mg, He didn't notice any decrease in the size of the swelling. The patient then reported to our department. The patient did not experience similar swelling in the past. The patient's general condition is stable, he is conscious, coherent, and cooperative with altered mental status.

On Extra oral examination, there were no relevant findings. The vitals of the patient were stable. On Intra-oral examination, an ovoid bluish swelling, soft in consistency, fluctuant, non-tender with well-defined borders and no discharge, approximately measuring 2 × 3.5 cms in size, was present in the left side floor of the mouth, extending from the lingual aspect of 33 to 35, lateral to the midline.

Based on history and clinical features it was provisionally diagnosed as "Ranula". Treatment done was Marsupialization using a diode laser under local anesthesia. Following which the sample was sent for Histopathological analysis which gave the final diagnosis of MUCOCELE.



Fig 1. Clinical Examination



Fig 2. Diode Laser



Fig 3. 7 Days Post-op



Fig 4. 3 Months Follow Up

DISCUSSION

Ranula are defined as mucoceles that occur in the floor of the mouth and frequently involve the sublingual salivary gland. They appear as fluctuant dome-shaped cystic lesions with a translucent bluish hue due to vascular congestion and tissue cyanosis¹. The color variation depends upon the size of the lesion and the elasticity of the overlying tissue. They are commonly seen in children and young adults usually in the second decade². They commonly occur unilaterally with a slight female predilection. Ranulas arise as a result of the extravasation of salivary contents following the rupture of the sublingual salivary gland duct due to which mucus is being forced into the surrounding tissues³. The diagnosis of ranula is based on the clinical examination or by aspiration of the lesion. Various management options for ranula, include incision and drainage, irradiation, marsupialization, and injection of sclerosing agents⁴. Among the Different kinds of lasers, Diode lasers are known to precisely cut, coagulate, ablate, and vaporize the target soft tissue. The use of a diode laser has the advantage of a bloodless field by clotting factor VIII, faster healing, and is easy to operate^{5,6}. The diode lasers are available in different wavelengths such as 810nm, 820nm, 830 nm, 940 nm, and 980 nm⁷. In the present case, a wavelength of 980 nm is used to achieve hemostasis because of its good affinity for hemoglobin pigment⁸. They also possess Bactericidal effects and reduce the bacterial growth on the wound bed which in turn reduces the risk of bacteremia⁸. Diode laser has an effective penetration depth of 2 mm into the tissues and can seal the smaller lymphatic vessels and minimize postoperative inflammatory edema. With the help of diode laser, wound healing occurs by the formation of a denatured protein coagulum called as a biological bandage that protects the wound from bacteria⁹. Kalakonda et al in their study found that laser-treated wounds have exhibited less scar formation due to the presence of a lesser number of myofibroblasts, which resulted in minimal wound contraction. Jinet et al. 2010 reported that diode laser is a good cutting device for the lesions of oral mucosa. It was also found that diode lasers are associated with discomfort and scarring¹⁰ when compared to other lasers like carbon dioxide, neodymium:yttrium -aluminum-garnet (Nd:YAG) and argon lasers. Hence in the present case, diode laser is used for excision of Ranula.

CONCLUSION

Diode lasers can be used in the management of ranula involving the floor of the mouth. They have the advantage of blood less field, less trauma and reduced postoperative discomfort to the patient, when compared with conventional methods.

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