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Case Report On Management Of Oral Mucocele In A Patient Using Electrocautery

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ABSTRACT
Introduction: *A mucocele appears as a well-rounded, circumscribed painless swelling ranging from deep blue to mucosa alike in colour. It is a mucus filling cavity that can appear anywhere in the oral cavity. Mucoceles rarely resolve on their own and surgical removal under local anaesthesia is required in most cases. A multitude of treatment options exists in the literature, including cryosurgery, intra-lesion injection of corticosteroid, micro-marsupialization and conventional surgical excision using a scalpel, and laser ablation. The purpose of this Case Report is to present the treatment of a mucocele present on the lower lip in a patient who was treated using Electrocautery, the advantages and disadvantages of this mode of treatment when compared with various treatment options for the mucocele.*
Case Report:*A 32-year-old male patient came to DENTIQUE Facial Aesthetic and Advanced Dental Clinic, Udaipur with the chief complaint of swelling present in the lower lip. Based on the history and clinical features, a provisional diagnosis of mucocele was given.*
Case Management:*The management of mucocele was done using electrocautery. The patient was recalled after 1 week for suture removal with no post-operative discomfort reported and minimal scarring shown.*
Discussion:*Electrocautery was well received by the patient, with a relative lack of discomfort, absence of bleeding, and minimal to almost no scarring after healing.*
Conclusion:*There are various treatment options available for treating mucocele, but electrocautery is a valuable treatment of choice pertaining to its added advantages of reduced pain and minimal scarring.*
Key Words*: Mucocele; Minor Salivary Gland; Electrocautery.*

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I. Introduction

Mucocele are mucus- filled cavities, whichappear in the oral cavity, appendix, gallbladder, paranasal sinuses, and lacrimal sac.[1,2] The term mucocele is derived from a Latin word, mucus and cocele means cavity.[3] Oral mucoceles represent an estimated 2% to 8% of all mucoceles.[4]It is caused by a collection of mucus that spills from the salivary glands and their ducts into the oral cavity's subepithelial tissue.[1] Mucoceles are characterized as rounded, well- circumscribed, transparent, and bluish- coloured lesions of variable size. They are soft in consistency and fluctuate on palpation. Mucoceles are painless and have a tendency to relapse.[5,6]They are mostly subdivided into two types: I. Mucus extravasation type, which is regarded as being a result of trauma, like lip biting. II. Mucus retention type, which results from the obstruction of the duct of a minor and/or accessory salivary gland.[1,7,8]

The Lower labial mucosa remains the most frequently affected site, but can also develop in the portions of cheek, the tongue, palate, and the floor of the mouth, where it is knownas a ranula.[1] Mucocele can arise within a few days after minor trauma, but then can increase in size and the diameter canrange from a few millimetres to a few centimetres.

Mucoceles rarely resolve on their own and surgical removal is required in most cases.[1,9,10] The literature describes different treatment options, including cryosurgery,[11,12] intra-lesion injection of corticosteroid,[10]micro-marsupialization,[7] conventional surgical removal,[1,9,13] and laser ablation.[14,15]

Surgical excision is the most-often used method of excising a mucocele. It does not require extensive armamentarium, is relatively economical and can be performed by most dentist surgeons. The disadvantages of this technique are delayed postoperative healing, greater bleeding and postoperative discomfort.[16]On the other hand, the Advantages of Electrocautery are the absence of postoperative discomfort, bloodless surgical site, and minimal scarring.

The purpose of this case report is to present the treatment of mucocele present on the lower lip in a patient who was treated using electrocautery, the clinical outcomes, and the advantages and disadvantages of electrocautery whencompared with various treatment options for the treatment of a case of mucocele.

II. Case Report

A 32-year-old male patient came to DENTIQUE Facial Aesthetic and Advanced Dental Clinic, Udaipur with the chief complaint of swelling present in the lower lip for the last 2 weeks. The swelling was small initially but then increased in size gradually. Occasionally, theswelling caused discomfort by interfering with speech or mastication. There was no history of lip-biting habits. His past medical, dental, and drug history were not significant. There was no contributory family history.

On oral examination, a solitary round sessile palpable fluctuant non-tender swelling around 1.5 cm with no increase in temperature was present on the right lower labial mucosa in the #33,34 region (Figure 1). The lesion had a reddish-blue hue compared to the adjacent mucosa. No other oral anomalies were detected. Based on the history and clinical features a provisional diagnosis of mucocele was given.

Treatment

The patient was advised for excision of the lesion along with the removal of the affected adjacent minor salivary gland tissue. A written, informed consent was obtained from the patient. Removal of the lesion was performed under local anaesthesia by using electrocautery. Local anaesthesia was administered around the lesion. In this case, local anaesthesia of 1.5 ml Lidocaine with 1:100,000 epinephrine, was administrated through local infiltration on the lower lip. Before infiltration, a topical aesthetic gel for 3 minutes was applied. The electrocautery that was used in this case was YOUNIQUE RF Electrosurgery Unit, with a rated output frequency of 4.2 M cycle and a unit wattage of 225 W. The lip was everted with digital pressure to increase the lesion's prominence. The preferred method to excise the lesion in a minimally invasive way was by circular motion surrounding the lesion. (Figure 2). The lesion was held by forceps and pulled slightly while it was being excised at the base. Minor salivary glands around the lesion were also excised to prevent a recurrence (Figure 3 & Figure 4). The tissues were then sutured using 3-0 silk sutures (Figure 5). An analgesic was prescribed and post-operative instruction was given. The patient was recalled after 1 week for the suture removal (Figure 6).

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

III. Discussion

Mucocele is a common lesion of the oral mucosa, which affects the general population. Mucocele can arise from an alteration of minor salivary glands due to mucous accumulation.[17]Yamasoba et al. 1990 highlighted two etiological factors in mucocele: Traumatism and obstruction of salivary gland ducts.[18] Mucocele of the minor salivary gland are very rarely large in diameter and moreover always superficial. Extravasation mucocele are caused by a leaking of fluid from ducts or acini into surrounding tissue. They are commonly found in the minor salivary glands. Trauma causes a leakage of salivary secretion into the surrounding submucosal tissue. Diagnosis is mainly based on clinical findings; The appearance of a mucocele is especially characteristic[3]and location of the lesion, any history of trauma, the rapid appearance, the variations in size, the bluish‐ colour, and the consistency are some of the important factors[19] to be considered before the final diagnosis are made.

Literature shows oral habits such as lip biting/sucking as one of the etiologic factors for the oral lesions such as irritation fibroma and mucocele.[20] Radiographic evaluation is needed to rule out if sialoliths are considered to be a contributing factor in the formation of oral and cervical ranulas. Palpations can be extremely helpful for a correct differential diagnosis. Lipomas and tumours of minor salivary glands present with no fluctuation while cysts, mucoceles, abscess, and hemangiomas show fluctuation.[21]Conventional treatment is the surgical extirpation of the surrounding mucosa and glandular tissue below the muscle layer. With a simple incision of the mucocele, the contents of the lesiondrain out but the lesion has a tendency to reappear as soon as the wound heals.[15]Surgical excision with removal of the involved accessory salivary gland has been suggested as the treatment although the disadvantages are extensive bleeding during the procedure and postoperative discomfort. Marsupialization will only result in re‐ occurrence.[22]

Advantages of electrocautery observed in this case are the absence of postoperative discomfort, bloodless surgical site, and minimal scarring. The other benefits of electrocautery are that cuts are made with ease when the device is set correctly, haemostasis is immediate and consistent, the wound is nearly painless and the tip is self-disinfecting.[16] On the other hand, electrocautery has certain disadvantages such as the need for an anaesthetic agent for cutting, and an unavoidable burning flesh odor.

IV. Conclusion

Mucoceles are one of the most common minor salivary gland disorders in the oral cavity, which are primarily diagnosed based on clinical findings followed by a definitive diagnosis based on the histopathological investigation. Management of mucocele poses a challenge because of the high probability of recurrence. Complete excisionof the lesion with thorough dissection of the surrounding minor salivary glands often leads to a definitive clinical success without recurrence and an overall better prognosis. There are various treatment options available, but electrocautery is a valuable treatment of choice due to its advantages of reduced pain and minimal scarring.

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