



ORAL MUCOCELE-A CASE REPORT

Kamal Sagar^{1*}, Cheena Singh², Ritika Arora³

¹Demonstrator, Deptt. of Endodontics & Conservative Dentistry, ²Demonstrator, Deptt. of Oral Medicine & Radiology (Post Graduate Institute Of Dental Sciences, Rohtak, Haryana 124001, India.

³Reader, Deptt of Periodontics, Vadik Dental College & Hospital, Daman & Diu, U.T. of India.

Corresponding Author:- **Kamal Sagar**
E-mail: dr.kamalsagar@gmail.com

<p>Article Info <i>Received 15/04/2016</i> <i>Revised 27/05/2016</i> <i>Accepted 12/06/2016</i></p> <p>Key words: Mucocele, Diode Laser, Cyst, Mucous Retention Cyst, Salivary Gland.</p>	<p>ABSTRACT</p> <p>Mucocele is a common lesion of the oral mucosa that results from injury or obliteration of minor salivary glands due to mucous accumulation causing limited swelling and discomfort. Two histological types exist - extravasation and retention. Clinically they consist of a soft, bluish and transparent cystic swelling most commonly seen on lower lip followed by buccal mucosa and ventral surface of tongue. Basically, it is a mucin filled cavity surrounded by compressed collagen fibres. In this case report, mucocele excision with diode laser is discussed.</p>
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INTRODUCTION

The term mucocele is derived from the Latin word, mucus and coele means cavity [1] which is the seventeenth most common salivary gland lesion of the oral cavity [2]. It is most commonly seen on the lower lip, lateral to the midline [3] and rarely on upper lip, retro molar pad or palate/tongue. Mucocele may occur at any age, but incidence in the second and third decade of life [4] mainly in children, adolescents and young adults are high.

Mucoceles can be solitary or multiple often rupture and leaving behind slightly painful erosions that usually heal itself within few days [5]. They are either the extravasation type or the retention type. Extravasation Mucocele results from severance of minor salivary gland duct and the consequent spillage of mucin into the soft tissues around the gland [6] while retention Mucocele occur due to decrease or absence of glandular secretion produced by the blockage of the salivary gland ducts.

Clinically, there is no difference between extravasation and retention type. When Mucocele is located in the floor of the mouth it appears as "Belly of a frog" and is called as a 'ranula'.

Case report

A 27 years old female patient reported to the OPD of Periodontics & Oral Implantology at Maulana Azad Institute Of Dental Sciences (MAIDS, New-Delhi, India), with the chief complaint of painless growth on lower left lip for two years. (Fig-1). The growth was initially small and gradually increased in size, present on the inner aspect of lower lip against teeth #33 and #34 region. The swelling was superficial, bluish, fluctuant, round in shape approximately 1×1 cm in size, non-tender with diffuse margins (Fig-2). The overlying mucosa was normal. Physical examination revealed no other abnormalities like cervical lymphadenopathy and facial asymmetry. The patient's medical and family history was also not significant. The provisional diagnosis was formulated as a Mucocele on the basis of the history, location and Clinical features of the lesion. The treatment planning consisted of the surgical removal of the lesion by diode laser [7]. Routine blood investigations with random blood sugar and INR were also advised to the patient before the surgical intervention.



The patient was subjected to Phase I periodontal therapy 1 week before the surgical excision. After ensuring that the all routine investigations of the patient were within the normal limits, excisional biopsy of the lesion was performed under local anesthesia (2% LIGNOCAINE HCL with ADR) with diode laser (Fig-3) at 1.5Hz power on Continuous mode with 890-900nm wavelength(Fig-4). All necessary precautions were taken while performing laser surgery for both patient as well as operator [8].

Once the lesion had been removed, the surgical field was wiped with sterile gauze soaked in 1% normal saline solution [Fig-5]. The patient was advised to avoid smoking, alcohol and spicy food till the operated site heal. Antibiotics, analgesics with 2% chlorhexidine gluconate mouth wash were also prescribed for 5 days. Patient was recalled after 14 days for follow up. The specimen was

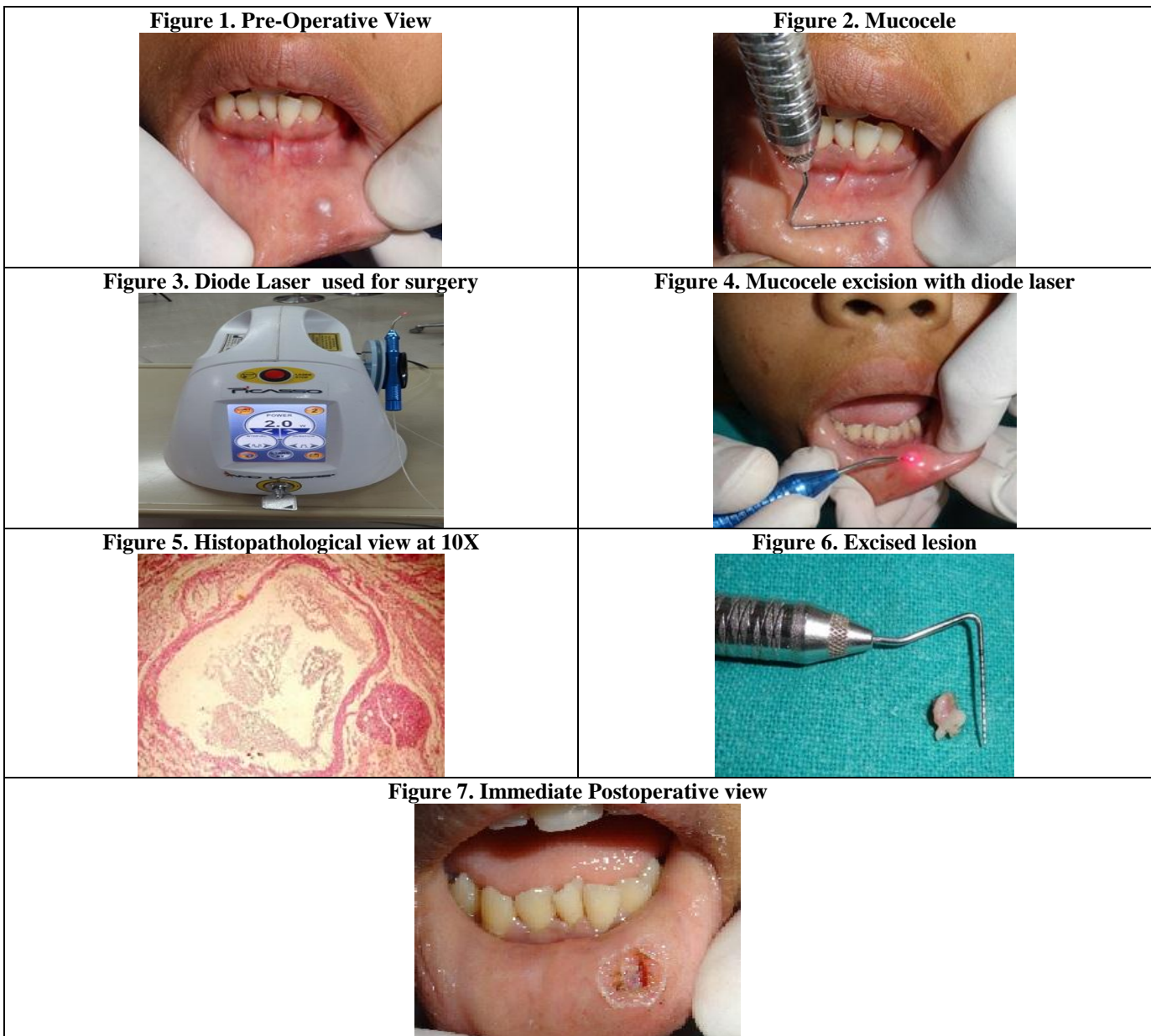
placed in 10% formalin and sent for histo-pathological examination [Fig-6]

Differential diagnosis

The differential diagnoses for this lesion includes mucocele, epulis, salivary gland tumour, traumatic lesion and vesiculobullous lesion (mucous membrane pemphigoid).

Histopathology

Histopathological report showed areas of spilled mucin surrounded by a granulation tissue with infiltration of chronic inflammatory cells and foamy histiocytes. Dilated salivary gland ducts were also seen in the H & E stains at 10x which confirmed the diagnosis of mucocele (Figure-7).



DISCUSSION

Mucocele is the second most common benign soft cystic lesion of the oral cavity [9]. The incidence of Mucocele is 2.5 per 1000 patients with slightly high female prevalence of about 1.3:1 [10] It usually occurs as an isolated lesion, although more than one may be present at a time as in case of superficial mucocele [11].

Mucocele mostly present as a dome shaped swelling with intact epithelium over it, however in this reported case it was a single and round shaped swelling. Mucocele occupies 70% of the salivary gland cysts (6% of all parotid lesions) and they usually arise from minor salivary glands and are non neoplastic localized lesions of the duct system [12]. Mucocele of the minor salivary glands are rarely larger than 1.5 cm in diameter. However; in our case it was measured to be 10x10 mm in size

Mucocele can be traumatic or non-traumatic in origin. Parafunctional habits such as lip biting being the most common contributory factor for occurrence of an oral Mucocele. The literature reveals that most of the patients give a history of spontaneous development (71.4%), followed by lip biting (25.7%) and trauma (2.9%). Yamasoba et al highlighted two crucial etiological factors in Mucocele formation; traumatism and obstruction of salivary gland ducts. But in our case there was neither trauma nor any obstruction of salivary ducts. Mucous is produced exclusively by the minor salivary glands. The diagnosis of Mucocele is based principally on the clinical examination. It usually presents as a bluish, soft, transparent cystic swelling which frequently resolves spontaneously. The duration of the lesion is not constant; it varies from a few days to 3 years. The blue color is caused by vascular congestion, and cyanosis of the tissue above and accumulation of the fluid below. Coloration can also depend on the size of the lesion, proximity to the upper surface and elasticity of the superficial tissue. Mucocele is always associated with history of trauma that is why it is important to elicit proper history from the patient. The clinical appearance of Mucocele is pathognomonic such as location, variation in size, bluish color and the consistency.

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Clinically, diascopy can be helpful for a correct diagnosis [13]. The definitive treatment of mucocele is surgical excision by conventional scalpels, electrocautery ,cryosurgery, radiosurgery, or lasers. Although radiosurgery and electrocautery have the ability to control bleeding, ensure greater visibility, and are less invasive than an incision, their use results in low tactile sensitivity for cutting, unavoidable burning-flesh odor, and poor postoperative healing [14,15].

The advantages of lasers for the treatment of facial pigmentation, vascular lesions, and mucocele excision include a relatively bloodless surgical and post-surgical course, minimal swelling and scarring, minimal or no suturing, reduction in surgical time, and minimal or no post-surgical pain. Another benefit is the possible avoidance of needle infiltrated anesthesia, which is desired by many patients [16].

CONCLUSION

Mucocele is the most common benign self-limiting condition. It is commonly seen in young males. Trauma was the most common cause and majority of these lesions are seen in the lower lips. Majority of the cases can be diagnosed clinically however sometimes biopsy is required to rule out any other types of neoplasms. Different types of treatment options are available but the diode laser treatment shows more benefits with least relapse [17].

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.



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