

## Mucocele on the Lower Lip Treated By Two Techniques- A Case Report.

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### Abstract

Mucoceles are benign, mucus-containing cystic lesions of the minor salivary glands. These are not true cysts while most of them lack an epithelial lining. Most commonly the lesion occur in the lower lip. This case report presents two cases of mucocele on the lower lip. This lesion was diagnosed based on Clinical finding , history, and histopathological examination. The expurgation of the lesion was planed using diode laser and surgical excision method using scalpel blade.

**Keywords:** Mucoceles, Diode laser, Surgical excision and lower lip.

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### I. Introduction

Mucoceles are known as “mucus filled cavities” usually present in the oral cavity, paranasal sinuses and lacrimal sac. They occur due to ruptured salivary gland duct , usually caused by local trauma due to which swelling of the connective tissue occurs which consist of mucin.<sup>1</sup> A mucous cyst is a thin sac on the inner surface of the lip, which is painless but bothersome. The sac can also happen within the tongue , cheeks, floor of the mouth, palate and around the tongue. There is no known prevention to this, but could be avoided by not sucking the cheeks or lips between the teeth intentionally.<sup>8</sup>

Some mucoceles resolve instinctively by themselves after a short period of time, while others are chronic and require surgical removal. There are numerous procedures available for the removal of mucoceles, amongst those surgery is the conventional and time tested technique while lasers are minimally insidious technique with better patient comfort and acceptance. <sup>2</sup>The mucoceles can occur at any age, and both sexes are equally affected. The usual clinical history for mucocele is, one of a painless swelling, often recurrent in nature, that may be present for weeks to months or even years before the patient seeks treatment.<sup>9</sup>

### CLINICAL TECHNIQUE

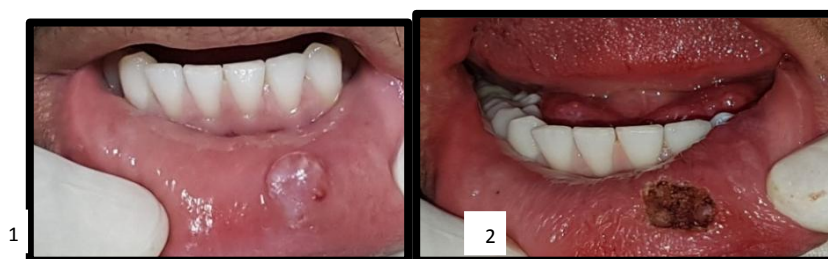
Two different methods of excision were utilized to remove the mucoceles. In the first case, diode laser was used to excise the mucocele from the lower lip . In second case, the mucoceles on lower lip treated by surgical excision method, using scalpel blade.

#### Case 1

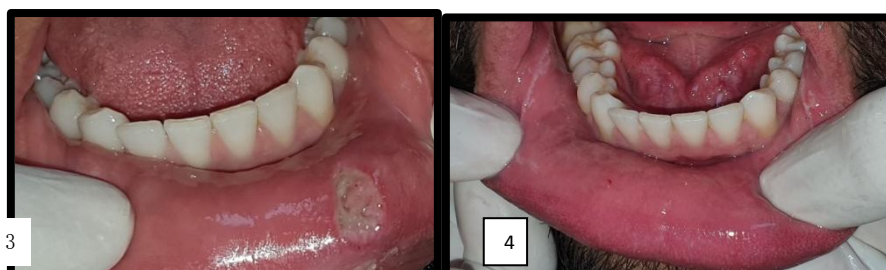
A 28 year old male visited the dental clinic with the chief complain of swelling in the lower left labial mucosal region for the past 2 weeks. According to the history of present illness of the patient he was apparently well 2 weeks back. Inadvertently and unconsciously he had bitten on his lower lip left inner side. The area was swollen then occasional inadvertent biting continuing and swelling increased to its present size. On clinical examination, lesion was soft, painless, fluid-filled, and approximately 1 × 1 cm in size (Figure 1). On the basis of available information the provisional diagnosis of mucocele was made. The treatment procedure was planned and it was decided to treat the diagnosed case under local anesthesia using laser therapy. written consent was taken prior to start the treatment procedure.

Following minimal infiltration of 1 : 2,00,000 Xylocaine, the lesion was excised using diode laser with the wavelength of , 2780 nm, in continuous mode. The incision was placed on the uppermost site of the lesion and complete excision was performed (Figures 2, Figure 3). The biopsy specimen was sent for histopathological examination, and diagnosis of mucocele was confirmed. Patient was recalled for regular checkup to evaluate

postoperative healing and any reoccurrence of the lesion. With the history of very little pain for the first 2 days and no symptoms thereafter, the healing at 1 week and 1 month was uneventful. There was no sign and symptom of recurrence of the mucocele at one month.



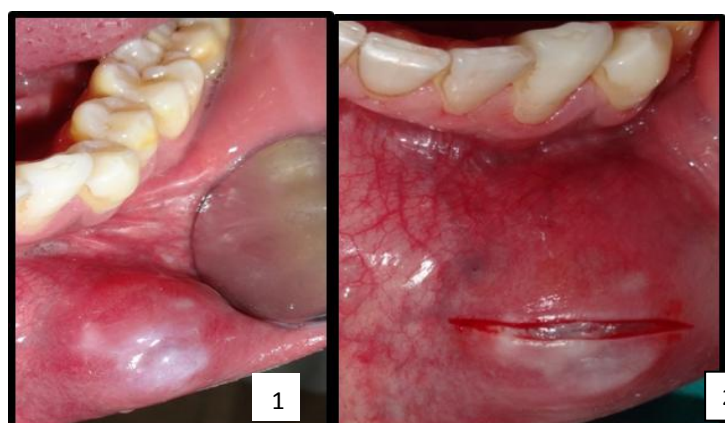
**Figure 1:** The mucocele lesion on left side of lower lip, **Figure 2 :** Removal of the lesion by Diode Laser



**Figure 3:** Post Operative view after a week, **Figure 4 :** Post Operative view after a Month.

## CASE 2

A 25 years old male reported with the chief complain of painless swelling on the inner aspect of the lower lip for last 10 days. Swelling was small initially, which increased progressively to attain the present size. The medical history was not significant. On intraoral examination, a round fluctuant, solitary swelling was seen on the inner aspect of the lower lip. Color of the swelling was the same as that of the adjacent mucosa. Based on the clinical findings, provisional diagnosis of mucocele was made. Lesion was carefully and completely excised surgically with scalpel blade under local anesthesia along with its wall and involved adjacent minor salivary glands. Sutures were placed after the surgical procedure. Histopathological report confirmed swelling as mucocele. Patient complain of mild pain at the surgical site for which he took Paracetamol SOS for 4 days postoperatively, there after the healing was uneventful at 1 week (sutures removal done) and 1 month postoperatively.



**Figure 1:** The mucocele lesion on left side of lower lip; **Figure 2 :** Intraoperative photograph showing Surgical Excision procedure of Mucocele

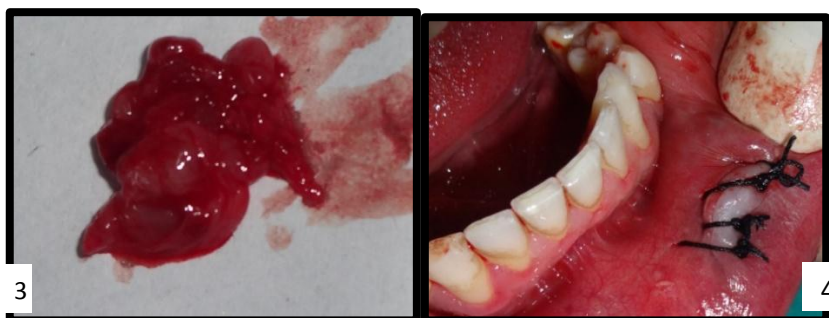


Figure 3: Excised tissue (Mucocele) Figure 4 :Sutures



Figure 5: Post operative view after 1 month

## II. Discussion

The occurrence of mucoceles in the general population is 0.4- 0.9%.<sup>3</sup> There is no gender preference. The manifestation of mucocele is pathognomonic. Location of lesion, rapid appearance, history of trauma , variation in size , blush color and consistency , clinical findings and history lead to the diagnosis of superficial mucoceles.

Lip contains adipose, connective tissue, nerves, blood vessels, salivary glands, and therefore , pathology of any of these tissues can create swelling on the lips. Mucocele, lipoma , fibroma , mucus retention cyst , phlebolith , sialolith and salivary gland neoplasm appear as swelling on the lip. Therefore, these can be distinguished from mucocele based on their clinical appearance , consistency, color, etiology and their location of occurrence.<sup>4</sup>

This paper reports the removal of two cases of mucoceles using diode laser and surgical excision method using scalpel blade with a one-month follow up.

Conventional surgical removal is the most common method used to treat mucocele. The commonly used treatment procedure is Elliptical incision. This helps to decrease the extent of mucosal tissue loss, decreases the occurrence of formation of large fibrous scars, and helps to prevent spilling of the cystic content, which could be responsible for recurrence.<sup>4</sup> Where in the recent years , the use of Diode lasers in dentistry has increased. In Diode laser the wavelength is 2780 nm ,which lies in the mid-infrared part of the electromagnetic spectrum. In the present case the use of laser eliminated the need for sutures and minimizes post-surgical scarring.<sup>7</sup>

The main advantages of soft tissue laser applications are minimal intraoperative bleeding ,swelling and postoperative pain, very less surgical time, scarring, and coagulation, no need of suturing after excision because of natural wound dressing due to denatured proteins.<sup>5,6</sup>

## III. Conclusion

One of the most common soft tissue lesion of oral cavity is Mucocele which is both esthetically unpleasing and functionally infuriating. While till date conventional surgical method was the treatment of choice but with the invent of diode lasers specifically for soft tissue lesion it has showed marked promising results because of its enumerable advantages, patient comfort and acceptance. Thus, we conclude that diode laser can be a better alternative to be used on large-scale minor soft tissue surgeries with better patient acceptability and healing prospects. Randomized control trials with large sample sizes are recommended to further substantiate the findings of this case report.

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