

## Nonsurgical Management of Oral Mucocele Occurring on a Rare Site

### Abstract

Mucocele is a common salivary gland lesion which most commonly occurs on the lower lip. Several treatment options are available for its elimination with surgery being the most commonly used method. A 49-year-old male presented with a small, round, painless swelling on the left buccal mucosa since 6 months. A clinical diagnosis of oral mucocele on the left buccal mucosa was made. Due to the inaccessibility of the posterior buccal mucosa region, sclerotherapy with sodium tetradecyl sulfate was planned. The patient did not show any obvious reduction in the size of swelling after 1 week of therapy. Therefore, a second injection was planned. After another 1 week, complete resolution of the lesion was seen with no complications. No recurrence of the lesion has been seen after 6 months of therapy. Due to the various drawbacks of surgical management of oral mucocele, sclerotherapy can be an effective alternative.

**Keywords:** Oral mucocele, sclerotherapy, sodium tetradecyl sulfate

**Trupti Vijay  
Gaikwad,  
Anuj Paul Maini,  
Sukanya Das,  
Sayali Lokhande,  
Shruti K Patil,  
Arunima Sarma**

*Department of Oral Medicine  
and Radiology, Dr. DY Patil  
Dental College, Dr. DY Patil  
Vidyapeeth, Pune, Maharashtra,  
India*

### Introduction

Mucocele is a mucous-filled cavity that can appear at various locations in the oral cavity. It is the 17<sup>th</sup> most common salivary gland lesion seen in the oral cavity. Two types of mucocele can appear – extravasation and retention.<sup>[1]</sup> The lower lip is frequently affected.<sup>[2]</sup> They are mostly asymptomatic, but in some cases, they may cause discomfort.<sup>[1]</sup> Various modalities are available for the treatment including surgery, laser ablation, cryosurgery, sclerotherapy, micro-marsupialization, laser surgery, and intralesional injection of sclerosing agent or corticosteroid. Although surgery is the most commonly used modality, it has numerous disadvantages such as lip disfigurement and damage to adjacent ducts with further formation of satellite lesions.<sup>[3]</sup> Therefore, the focus of interest has shifted toward nonsurgical treatment modalities such as sclerotherapy. We hereby present a case of a 49-year-old male patient with an unusual case of oral mucocele on the buccal mucosa, treated with sclerotherapy.

### Patient Information

A 49-year-old male patient reported to the department of oral medicine and radiology

with the chief complaint of painless swelling in the left-back region of the jaw for 6 months [Figure 1a]. The medical, family, and psychological histories were noncontributory. There was a history of constant trauma due to the third molars and a clear fluid discharge from the swelling. He had a history of visit to multiple clinics with the same complaint. With the advice of one dentist, he underwent extraction of the upper and lower third molars on the left side, 2 months back but did not have relief [Table 1]. After the extraction, trauma had subsided, but the swelling was persistent.

### Clinical findings

On examination, a solitary round-shaped swelling was seen on the left buccal mucosa near the occlusal level of 28 and 38, measuring approximately 4 mm in diameter [Figure 1b]. The mucosa surrounding the swelling appeared to be keratotic. It was soft in consistency, painless, compressible, nonmobile and, fluctuant. Based on history and clinical findings, a diagnosis of oral mucocele on the left buccal mucosa was given. All the other teeth were present, with no abnormality apart from mild stains.

### Therapeutic interventions

Due to inaccessibility of the posterior buccal mucosa, sclerotherapy with

**Submitted :** 13-Jul-2021

**Accepted :** 21-Oct-2021

**Published :** 11-Nov-2022

### Address for correspondence:

*Dr. Trupti Vijay Gaikwad,  
Department of Oral Medicine  
and Radiology, Dr. DY Patil  
Dental College and Hospital,  
Dr. DY Patil Vidyapeeth, Pune,  
Maharashtra, India.  
E-mail: trupti8795@gmail.com*

### Access this article online

#### Website:

www.contempclindent.org

**DOI:** 10.4103/ccd.ccd\_531\_21

#### Quick Response Code:



**How to cite this article:** Gaikwad TV, Maini AP, Das S, Lokhande S, Patil SK, Sarma A. Nonsurgical management of oral mucocele occurring on a rare site. *Contemp Clin Dent* 2022;13:389-91.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow\_reprints@wolterskluwer.com

sodium tetradecyl sulfate (STS) (Setrol 60 mg/2 mL) was planned. STS was diluted with normal saline in the ratio of 1:1 and an intradermal patch test was performed which showed no hypersensitivity to the drug. The swelling region was disinfected with betadine solution. Topical anesthetic gel was applied in the region of swelling and 0.3–0.5 ml of the solution was injected with an insulin syringe into the lesion until the solution leaked out [Figure 2a] Pressure was applied to the injection site for 5 min.

**Follow-up and outcome**

After 1 week, the patient was recalled to check healing. There was no obvious decrease in the size of the swelling. It was approximately 3 mm in diameter when measured with a Vernier caliper [Figure 2b]. Therefore, another injection was planned following the same protocol. After the next 7 days, the swelling had completely vanished [Figure 2c]. The patient is being regularly followed up and there is no report of recurrence, after 6 months of therapy.

**Discussion**

Sclerosing agents are irritants that act on the endothelial surfaces, resulting in the obliteration of space between the surfaces. The resultant obliteration causes tissue fibrosis and further reduction or disappearance of the lesions.<sup>[4]</sup> [Figure 3] There are three types of sclerosants: hyperosmolar, detergent, and chemical.<sup>[5]</sup> STS is a synthetic, surface-active substance which falls into the detergent category.<sup>[4]</sup> Necrosis and sloughing of the tissue occurs

when STS is used in the lesion leading to total or partial regression of the lesion.<sup>[6]</sup> Sclerotherapy is effective in the management of mucoceles, pyogenic granulomas, ranulas, vascular malformations, hemangiomas, and lymphatic malformations.<sup>[4]</sup>

These asymptomatic, fluid-filled cavities occur at any age with a higher frequency in the second and third decades of life.<sup>[7]</sup> Surgery is the most commonly used modality in the treatment of oral mucocele.<sup>[3]</sup> Sclerotherapy has several advantages over surgery: It is a safe, simple, effective, and minimally invasive technique, with negligible complications. There is minimal loss of blood and no requirement for any particular care.<sup>[4]</sup> Keeping this in mind, STS was used for treatment in our case.

In a case report by George *et al.*,<sup>[8]</sup> a similar agent was used for the treatment of oral mucocele occurring on the lower lip. There was complete disappearance of the lesion within 3 weeks with residual pigmentation. In another case reported by Shetty *et al.*,<sup>[9]</sup> a complete resolution of mucocele occurring on the lower lip was seen after 10 days of sclerotherapy with STS. In our case, two sessions of sclerotherapy were required to eliminate the lesion completely, which was present on the buccal mucosa. Due to the unusual location and inaccessibility of the posterior buccal mucosa region, sclerotherapy has emerged as a fruitful option of treatment in our case.

Our case exhibited the typical clinical features of irritational fibroma, including a nodule with normal color, occurring on the second most common site and presenting no pain. Here, history played a crucial role in diagnosis since the patient mentioned about the fluid discharge from the swelling.

Apart from STS, polidocanol has also proved to be an effective alternative.<sup>[10]</sup> At times, several sclerosants have

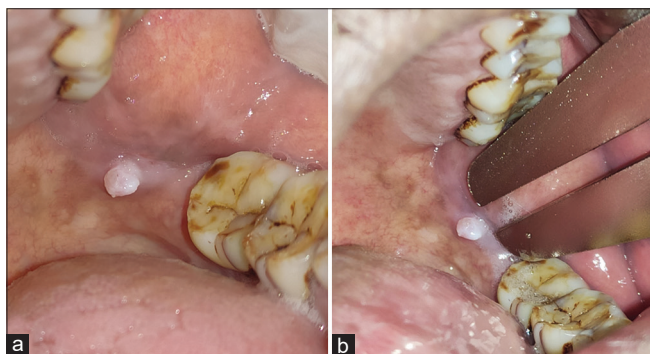


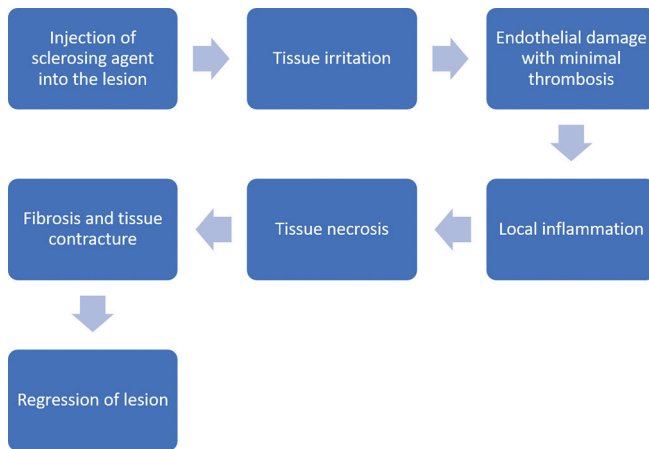
Figure 1: (a) A round swelling on the buccal mucosa near occlusal level of teeth 28 and 38. (b) Size of the swelling approximately 4mm

**Table 1: Timeline of history**

History	Time duration
Age of patient	49 years
Small swelling appeared on buccal mucosa	From 6 months
History of visit to multiple dentists	From 6 months
History of extraction	2 months back
Patient reported to the Out-patient department	December 2020



Figure 2: (a) Sodium tetradecyl sulfate injected with insulin syringe into the lesion. (b) Follow-up after 1 week of therapy showing no decrease in size. (c) Follow-up after another 1 week showing complete disappearance of the lesion



**Figure 3: Flow-chart showing mechanism of action of the sclerotherapy**

been known to cause localized swelling, anaphylaxis, hyperpigmentation, local discomfort, etc.<sup>[4,6,8]</sup> However, no negative effects of the therapy or recurrence were seen even after 6 months of therapy in our case.

### Patient perspective

The patient was worried about the lesion since it was painless and did not regress in size even after the extraction of his third molars. However, after the sclerotherapy, there was complete regression of the lesion with no signs of recurrence even after 6 months of therapy.

### Conclusion

Mucoceles are one of the most common salivary gland lesions of the oral cavity. Various treatment modalities are available for their treatment, but they have various disadvantages and can lead to frequent recurrence. Sclerotherapy is being performed for ages to treat vascular disorders which can be a very useful, safe, and cost-effective alternative in the treatment of oral mucoceles with the advantages of less invasiveness and reduced chances of recurrence, especially in inaccessible areas.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

### References

1. Laller S, Saini RS, Malik M, Jain R. An appraisal of oral mucous extravasation cyst case-mini review. *J Adv Med Dent Sci* 2014;2:166-70.
2. Hayashida AM, Zerbinatti DC, Balducci I, Cabral LA, Almeida JD. Mucus extravasation and retention phenomena: A 24-year study. *BMC Oral Health* 2010;10:15.
3. Sinha R, Sarkar S, Khaitan T, Kabiraj A, Maji A. Nonsurgical management of oral mucocele by intralesional corticosteroid therapy. *Int J Dent* 2016;2016:2896748.
4. Shah JS, Ranghani AF. Sclerotherapy in pyogenic granuloma and mucocele. *J Indian Acad Oral Med Radiol* 2018;30:230-4.
5. Dietzek CL. Sclerotherapy: Introduction to solutions and techniques. *Perspect Vasc Surg Endovasc Ther* 2007;19:317-24.
6. Reddy GS, Reddy GV, Reddy KS, Priyadarshini BS, Sree PK. Intralesional sclerotherapy – A novel approach for the treatment of intraoral haemangiomas. *J Clin Diagn Res* 2016;10:D13-4.
7. Agrawal S, Koirala B, Dali M, Shrestha S. Oral mucocele: Various treatment modalities. *J Kathmandu Med Coll* 2018;7:110-3.
8. George A, Loganathan E. Oral mucocele: The magic of sclerotherapy. *Skinmed* 2017;15:383-4.
9. Shetty VM, Rao R, Pai BS. Sclerotherapy in mucocele: A novel therapeutic approach. *J Cutan Med Surg* 2018;22:652-3.
10. Liu JL, Zhang AQ, Jiang LC, Li KY, Liu FZ, Yuan DY, *et al.* The efficacy of polidocanol sclerotherapy in mucocele of the minor salivary gland. *J Oral Pathol Med* 2018;47:895-9.