*Case Report*
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# Oral Mucocele of Lower Lip due to Lip Biting Habit: A Case Report

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## Abstract

Mucoceles are minor salivary gland lesions commonly seen in children and young adults. It is characterized by the presence of single or multiple, dome-shaped and fluctuant nodules, mostly asymptomatic, with sizes ranging from 1 or 2 mm to several centimetres. Although benign, it has the potential to cause functional disturbances and can impair feeding and dietary habits. The most common site is the lower lip and they have no obvious gender predilection. The color varies from deep blue to normal pink and the reported duration of this oral lesion varies from a few days to several years. Recommended treatment is often surgical excision and it minimizes the risk of recurrence. A case of an 11-year-old boy presenting with mucocele of the lower lip due to lip biting habit has been presented to enhance awareness regarding the diagnosis and management of oral mucosal lesions.

**Keywords:** Benign, Children, Lower Lip, Mucocele, Salivary Glands

## 1. Introduction

Mucocele or mucous extravasation phenomenon are oral mucosal lesions originating from the minor salivary glands, chiefly through the extravasation of mucus within the tissue resulting from the rupture of the salivary duct or acini[1,2]. This condition is frequently seen in young individuals and the prevalence varies from 0.37% to 11.49%[3]. It occurs most commonly on the lower lip and may involve the floor of the mouth, palate, cheek, and tongue[1,3]. It is more commonly presented in the first three decades of life and has an equal predilection for males and females[1].

The etiological factors chiefly responsible for the development of mucous extravasation phenomenon are traumatic severance of a salivary duct and obstruction of salivary gland ducts[1,4].

This case report aims to highlight the clinical presentation; histological features and clinical management of mucocele associated with a lip-biting habit which will help enhance the knowledge and awareness of general dental practitioners treating child patients.

## 2. Case Report

### 2.1 Patient Characteristics

An 11-year-old healthy male patient presented to the pediatric dental clinic with swelling in the lower lip region for 14 days with difficulty in eating. The parents confirmed the lip-biting habit. Swelling was painless in nature and past family and medical history regarding swelling was found to be inconsequential.

Intraoral examination of the lesion revealed the presence of a soft, fluctuant, spherical, and palpable swelling on the lower lip. It had a smooth surface without any ulceration (Figure 1(A)).

### 2.2 Laboratory Evaluation and Diagnosis

An excisional biopsy was performed after obtaining consent from the parents (Figure 1(B), 1(D)). Histopathological examination revealed stratified squamous epithelium with underlying fibrocellular connective tissue showing mucous pooling along with a mixed inflammatory infiltrate and some blood vessels (Figure 2). After completing the routine

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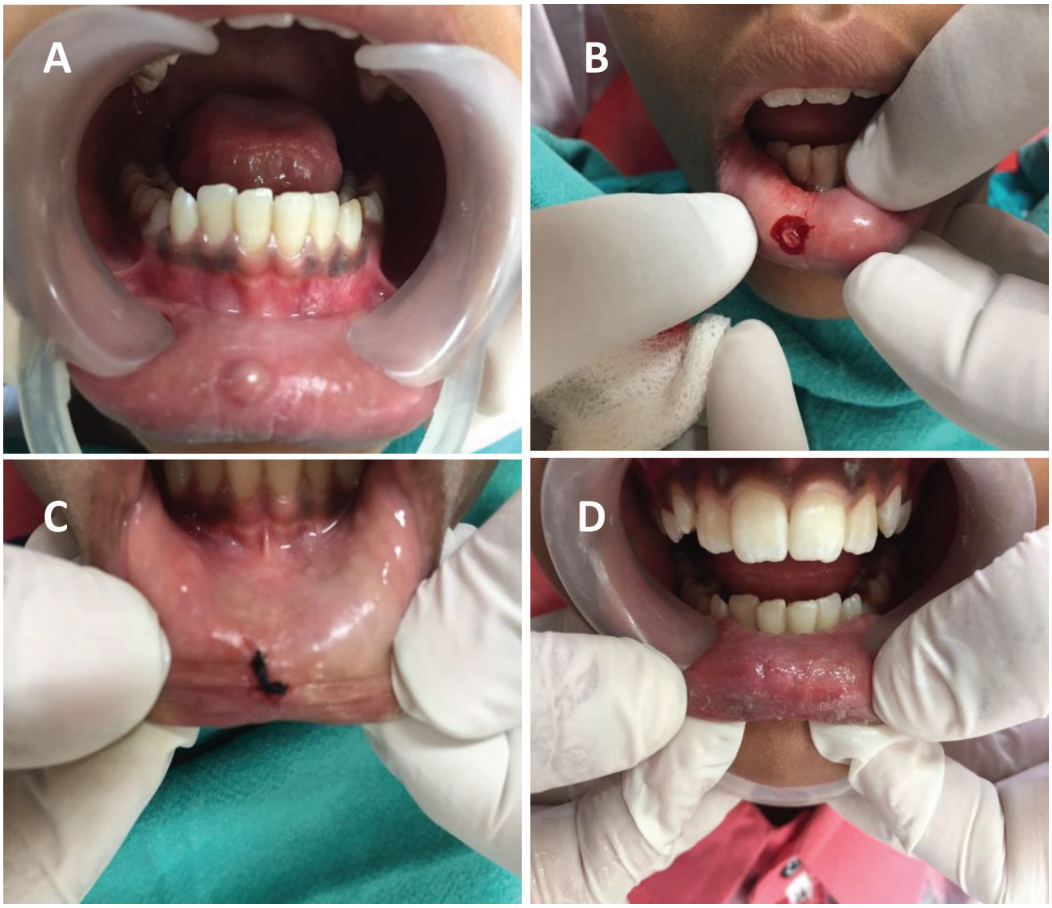



**Figure 1.** **(A)** A smooth surfaced, soft, fluctuant, spherical, and palpable swelling on the lower lip, **(B-C)** excisional biopsy performed, **(D)** No sign of recurrence at one-week follow-up.

blood investigations, the values were found in the normal range. A diagnosis of mucocele was confirmed based on the clinical and histopathological findings of the patient.

### 2.3 Follow-up

The child patient was recalled for follow-up after one week and no signs of recurrence were seen (Figure 1(D)). The healing was uneventful at the biopsy site and no evidence of recurrence was reported.

## 3. Discussion

Mucocele is the benign lesion of salivary glands and is characterized by the pooling of mucus in a cavity within the connective tissue. It cannot be considered a true cyst as an epithelial lining is lacking[1]. Since small salivary glands are distributed across the entire buccal mucosa, mucocele can arise in any tissue of the oral mucosa, except the gingival tissue[2]. When oral mucocele is discovered on the ventral aspect of the tongue or in a younger population, patients should be advised of the possibility of a recurrence with greater caution[5].

### 3.1 Etiopathogenesis

The development of mucocele is preceded by the traumatic severance of the salivary duct. The traumatic severance can result from a lip-biting habit or pinching the lip by extraction forcep[1]. However, a case of mucocele due to an improper feeding bottle has also been reported in the literature[6].

### 3.2 Treatment

Treatment is not required for very small or superficially based mucoceles[7]. The different treatment modalities include complete surgical excision, marsupialization, and dissection of the mucocele[1]. Local surgical excision

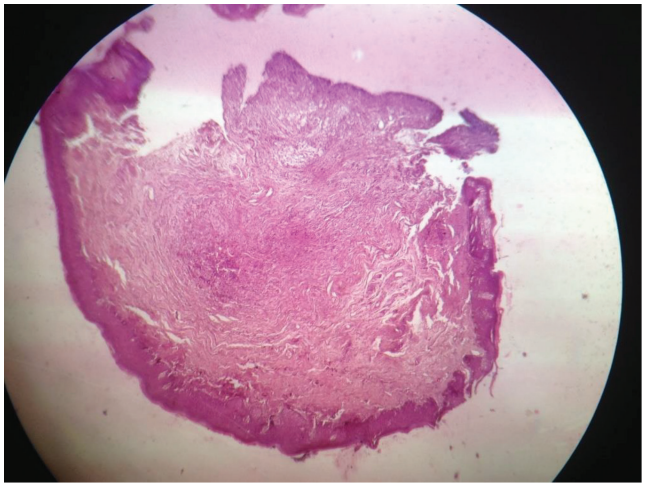


**Figure 2.** Histopathological examination reveals stratified squamous epithelium with underlying fibrocellular connective tissue, mucous pooling, and mixed inflammatory infiltrate.

along with removal of the involved accessory salivary gland is the conventional treatment[1]. Diode laser with thermoplasticized splint, butane-isobutane refrigerant spray, and absolute ethanol have been used successfully to treat mucocele and are other therapeutic alternatives[8,9]. However, in the present case, complete surgical excision was planned only after obtaining informed consent from the parents of the child patient.

### 3.3 Learning Points

- Accurate diagnosis and management of oral mucosal lesions is essential to prevent further complications.
- It is crucial to get the biopsy and histopathological analysis done to arrive at a definite diagnosis.
- Novel and conservative management strategies that are capable of reducing anxiety in child patients are more acceptable.
- Management of mucocele in children with special healthcare needs requires utmost care.
- Review and follow-up are essential and patients and parents should be informed about the possibility of recurrence and monitoring of harmful habits.

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