

# Dental Management of Lower Lip Pathology: A Case Report

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## Introduction

A mucocele is a benign cyst resulting from the rupture of a salivary duct, leading to mucin accumulation in the soft tissue and subsequent swelling. Often associated with trauma, such as lip biting, mucoceles typically present as dome-shaped swellings with a bluish, translucent hue, most commonly on the lower lip. Treatment ranges from observation, allowing spontaneous rupture, to interventions like laser removal, surgical excision, or cryotherapy for persistent or large lesions. This case details a 14-year-old female presenting to the UNLV Pediatric Clinic with a 10mm fluctuant nodule with a blue hue. Potential diagnoses will be discussed and emphasizing the importance of interprofessional collaboration in treatment planning.

## Case Report

### Patient Background

**Chief Concern:** Bump on the lower lip, bothering patient.

**Medical Conditions:** None reported

**Medications:** None reported

**Allergies:** None reported

**Birth:** Full term, no complications

**Intraoral Evaluation (see Figure 1):** 10 mm fluctuant mass on inside of lower lip. Soft to touch.

### Differential Diagnosis #1: Mucocele

#### a. Habits

Patient reported having a lip-biting habit. Biting near a minor salivary gland can rupture or damage the small duct that carries saliva in the mouth (2). This saliva will leak into the surrounding tissues instead of draining. This can lead to a fluid-filled cyst.

#### b. Trauma/Injury

Patient has had braces on for a year and a half. Brackets and wires can rub against the inner lip causing microtrauma (1). The constant irritation can block the minor salivary gland ducts allowing the mucous to pool under the tissue.

### Differential Diagnosis #2: Mucoepidermoid Carcinoma

#### a. Genetic Mutation

Changes in certain genes such as **CRTC1-MAML2 fusion** can lead to the formation of Mucoepidermoid Carcinoma. This malignant tumor can occur in minor salivary glands (5).

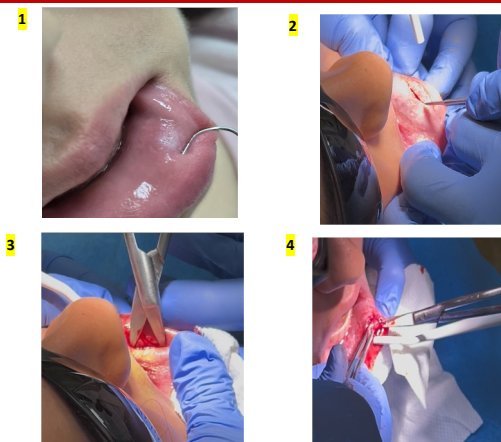
#### Confirmed Diagnosis: Mucocele

An incisional biopsy was performed with a 15 scalpel and curved scissors to removed tissue. The incised tissue was placed in formalin and silver nitrate was placed on the surgical site to control hemorrhage. 4 interrupted sutures were placed. The specimen was sent to a pathology lab for analysis.

Treatment choices included excision (laser versus scalpel) or observation. Mucoceles that are observed are likely to reoccur. All risks, alternatives, and benefits were discussed with the patient's guardian. Guardian chose to excise lesion.

## Conclusion

Although mucoceles are benign lesions, they often cause discomfort and can affect dietary habits. As the case report demonstrated, a mucocele is best treated with surgical excision or laser therapy. Surgical excision allows adequate healing and no recurrence after 6 months. If treated with a laser, healing is faster and there is minimal discomfort (1). Although laser is favored in terms of comfort and quick recovery, surgical removal often allows ablation of neighboring minor salivary glands to prevent recurrence (3). Depending on the age, fear and anxiety of pediatric patients, minimally invasive approaches are more beneficial for the comfort of the patient (4).



## References

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