

LOWER LIP MUCOCELA REMOVAL - CASE REPORT

МУКОЦЕЛА НА ДОЛНА УСНА - ПРИКАЗ НА СЛУЧАЈ

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Abstract

Introduction: Mucoceles are one of the most common lesions on the lower lip mucosa salivary glands. Their etiology is the sub-epithelial accumulation of mucous due to the retention or extravasation of mucus from minor salivary glands. Clinically, they appear as an asymptomatic vesicle or bulla with a pink or bluish coloration. They may be treated in both ways, either surgically or non-surgically (cryotherapy). These lesions are often called cysts, but mucoceles are not true cysts because they have no epithelial lining. **Aim:** To emphasize the importance of the most appropriate surgical technique, in order to perform complete surgical elimination of the pathologic lesion. **Case report:** A generally healthy male patient came to our clinic with cyst-like lesion on the lower lip mucosa. He complained of a painless swelling on his lower lip lasting for one year. The patient also had a history of lip-biting. Upon clinical inspection, a soft, round, dome-shaped bluish lesion with a pearly appearance was identified on the left side of the lower labial mucosa. On palpation, the lesion was mobile and non-adherent to the underlying tissues. After the clinical examination, a working diagnosis of mucocele was established, and a surgical excision of the lesion ("in toto") was planned and later performed. A histopathological analysis was performed which proved our working clinical diagnosis. **Conclusion:** Complete surgical removal of mucocele lesions minimizes the reoccurrence rate and reduces local tissue scarification. **Key words:** mucocele, surgical treatment, histopathology, lower lip.

Апстракт

Вовед: Мукоцелите се едни од најчестите лезии на слuzницата на долната усна. Нивни етиолошки фактор претставува суб епителијална акумулација на мукос заради негова ретенција или екстравазација од малите плункови жлезди. Клинички тие се појавуваат како асимптоматска везикула или була со розева или плавкаста боја. Може да се третираат на двата начини, хируршки и нехируршки. Овие лезии често се нарекуваат цисти, но всушност мукоцелите не се вистински цисти бидејќи немаат епителна обвивка. **Цел:** Да се нагласи важноста на изборот на најсоодветна хируршка техника, со цел да се изврши целосно хируршко отстранување на патолошката лезија. **Приказ на случај:** Пациент, маж, во генерално добра здравствена состојба дојде со лезија на мукозата на долната усна. После извршените клинички анализи поставена беше работна дијагноза на мукоцела, и извршено беше хируршко отстранување на лезијата intoto. Извршена беше хистопатолошка анализа на отстранетиот примерок, со која се докажа нашата клиничка работна дијагноза. **Заклучок:** Комплетното хируршко отстранување на мукоцела ја минимизира стапката на рецидивирање, како и скарификација на локалното ткиво. **Клучни зборови:** мукоцела, хируршки третман, хистопатологија, долна усна.

Introduction

Mucocele is defined as a sub-epithelial accumulation of mucus secreted from the salivary glands and their ducts in the mucosa of the oral cavity¹.

The term mucocele is derived from the Latin words, mucus and coele meaning cavity².

Mucocele develops as a consequence of mechanical trauma to a minor salivary gland, which is followed by saliva retention and accumulation inside the blocked and dilated excretory ducts of the gland³.

Mucocele can occur as either an extravasation or retention phenomenon, known as a mucus extravasation cyst or

mucus retention cyst. It can also be classified as a superficial mucocele that is located directly under the mucosa, a classic variant located in the upper submucosa, and a deeper mucocele located in the lower corneum.

This is the result of the accumulation of liquid or mucoid material due to alterations of the minor salivary gland, which results in localized swelling⁴, and is characterized by a rounded, well-circumscribed, transparent, and bluish-colored lesion of variable size. Most often, they are soft in consistency and fluctuant on palpation.

Mucocele clinically appears as an asymptomatic vesicle or bulla with a pink or bluish-color, and their size may vary from 1 mm to several centimeters and affect both gen-

ders in all age groups⁵, with a peak age of incidence between 10 and 20 years.

Aim

To emphasize the importance of selecting the most appropriate surgical technique, in order to perform a complete surgical elimination of the pathologic lesion.

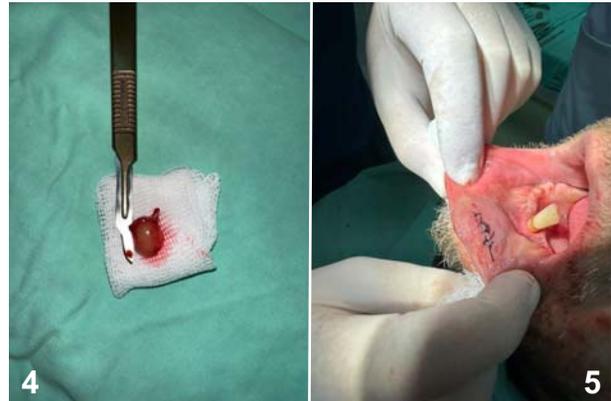
Case report

A male patient, 41 years of age, in generally good health, came to our clinic for oral surgery and implantology, at the University Clinical Center "St.Pantelejmon", Skopje, with a complaint of an elevated lesion on the left corner of the lower lip. On clinical examination, it appears as a painless red to bluish bulla of 1 cm diameter in size that had persisted for several months in this location. On clinical palpation, the lesion was soft, fluctuant beneath the finger, and oval in shape.

From this examination, an initial diagnosis was established, and a surgical intervention was planned. The treatment was explained to the patient. Local anesthesia, Scandonest 3% (mepivacaine HCl) was applied. Surgical

removal of the lesion was planned and performed by placing an elliptical incision. After the elliptical incision, the underlying mucosa was separated from the mucocele epithelium, and the lesion was gently removed "in toto" from the base (picture 1, 2, 3).

Dimensions of the excised lesion were around 1 cm in diameter in size (picture 4).



Picture 4. Dimensions of the lesion

Picture 5. Single sutures

Hemostasis using single interrupted sutures was applied (picture 5). The removed mucocele was sent to the Institute for Pathology, Faculty of Medicine, Skopje, for further histopathological examination. Recommendations for monthly follow-up visits were given for the first year after the surgery.

Histopathology confirmed the working diagnosis of mucocele (Picture 6).



Picture 1. Elliptical incision and mucosa separation

Picture 2. Mucocele examination



Picture 3. Mucocele removal "in toto" from the base

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Клиничка дијагноза: 	Материјал: 	
Вид на испитувани материјал: Оraleine Histol		
Материјал име:		
ХИСТОПАТОЛОШКИ НАОД		
MUCOSCELE K114 - K118		
Микроскопски метод: Дистален, в направени исечок од мукоза со димензии 1x0,5cm под кој се наоѓа цистична формација со просечен вид со пречник од 1cm. Материјалот е целосно вклучен за анализа во 1 направени исечок.		
Микроскопски наод: Микроскопската анализа покажува природен соодветен неоперативниот типет на мукозата под кој се наоѓа цистична формација обложена со цврст цистичен без епител, или на места со замешани со инфилтратиско со мускул. Во почеток на цистата се наоѓа акумулиран мускул. Наодот одговара на мукоцеле.		
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Picture 6. Histopathology

Discussion

Mucoceles, as the most common soft tissue lesions of the lower lip, are an aesthetic and functional problem for patients. Therefore, the need for their complete removal (excision in toto) is usually required. The site where they most commonly occur is of utmost aesthetic importance to the patient, and thus choosing the therapeutic modality that ensures a good aesthetic outcome and minimizes tissue scarification is crucial.

The surgical approach to mucoceles and ranulae remains the most common treatment and depends on various factors: the size of the lesion is the most important⁶.

There are three possible surgical approaches to manage mucoceles of the lips, cheeks, and palate: complete excision, marsupialization, dissection⁷.

For avoiding the recurrence of surgically removed mucoceles care must be taken not to injure adjacent minor salivary glands⁸. If the excretory duct of the adjacent minor salivary glands becomes damaged or ruptured, it can lead to an extravasation mucocele, whereas if during suturing of the oral mucosa the excretory duct of the adjacent minor salivary glands is sutured or ligated, a retention mucocele can occur.

Mucoceles are the second most common lesions of the oral mucosa after benign tumors such as fibromas, followed by hemangiomas and lymphangiomas⁹.

Literatures shows that oral habits such as lip biting/sucking is one of the etiologic factors for the oral lesions such as irritation fibroma and mucocele¹⁰. Therefore, it is essential to remove potential etiological factors that could contribute to their development, such as sharp edges of retained teeth or poorly fitting conservative/prosthetic restorations, as well as to address any harmful habits, if present.

Conventional treatment is the surgical extirpation of the surrounding mucosa and glandular tissue below the muscle layer. With a simple incision of the mucocele, the content can drain out, but the lesion would reappear as soon as the wound heals¹¹.

Surgical excision with removal of the involved accessory salivary gland has been suggested as the treatment. Marsupialization can result in recurrence¹².

Conclusion

Complete surgical removal of the mucocele lesions minimises recurrence rate and reduces local tissue scarification. CONFLICT OF INTERESTS NIL

Reference

1. Sukhtankar LV, Mahajan B, Agarwal P. Treatment of lower lip mucocele with diode laser – A novel approach. *Ann Dent Res*. 2013;2(Suppl 1):102–8.
2. Yagüe-García J, España-Tost AJ, Berini-Aytés L, Gay-Escoda C. Treatment of oral mucocele-scalpel versus CO 2 laser. *Med Oral Patol Oral Cir Bucal*. 2009;14:e469–74.
3. Kilinc, A.; Saruhan, N.; Gundogdu, B.; Yalcin, E.; Ertas, U.; Urvasisozlu, G. Benign Tumors and Tumor-like Lesions of the Oral Cavity and Jaws: An Analysis of 709 Cases. *Niger. J. Clin. Pract.* 2017, 20, 1448–1454
4. Bagán Sebastián JV, Silvestre Donat FJ, Peñarocha Diago M, MiliánMasanet MA. Clínico-pathological study of oral mucoceles. *Av Odontostomatol*. 1990;6:389–91. 394.
5. Neville B, Damm DD, Allen CM, Bouquet JJ. *Oral and Maxillofacial Pathology*. 2nd ed. Philadelphia: W. B. Saunders; 2002. pp. 389–92
6. Baumash HD. A case against sublingual gland removal as primary treatment of ranulas. *J Oral Maxillofac Surg*. 2007;65:117-21
7. Baumash HD. Mucoceles and ranulas. *J Oral Maxillofac Surg*. 2003;61:369-78
8. Baumash H The etiology of superficial oral mucoceles. *J Oral Maxillofac Surg*. 2002;60:237–8. doi: 10.1053/joms.2002.30877.
9. Pinto, A.; Haberland, C.M.; Baker, S. Pediatric Soft Tissue Oral Lesions. *Dent. Clin. N. Am.* 2014, 58, 437–453.
10. Barbería E, Lucavechi T, Cárdenas D, Maroto M. An atypical lingual lesion resulting from the unhealthy habit of sucking the lower lip: Clinical case study. *J Clin Pediatr Dent*. 2006;30:280–2. doi: 10.17796/jcpd.30.4.p20272221365477w.
11. Huang IY, Chen CM, Kao YH, Worthington P. Treatment of mucocele of the lower lip with carbon dioxide laser. *J Oral Maxillofac Surg*. 2007;65:855–8. doi: 10.1016/j.joms.2006.11.013.
12. McDonald RE, Avery DR, Jeffrey A. Dean – *Dentistry for the child and adolescent*. 8th ed. Missouri: Mosby – St Louis; 2004.