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Blandin-Nuhn's Gland's Mucocele

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Abstract

Aim: The aim of this article is to report a rare case of mucocele of Blandin-Nuhn glands and discuss the most appropriate therapeutic approach.

Materials and Methods: A 16-year-old female patient was referred to us reporting the recurrence of a circumscribed neoformation located on the apex of the ventral surface of the tongue. The parents reported the relapse of the lesion following the initial surgery. Based on the clinical aspects and since it was a relapse, the probable diagnosis is determined as a cyst of the Blandin-Nuhn glands. A histopathological examination followed the excisional biopsy of the lesion performed with a classical scalpel. Within 7 days of the biopsy, complete repair of the tissue was observed.

Results: The definitive diagnosis of the case was mucocele of Blandin-Nuhn glands. The Pathologist described the sample as an oral mucosa with stroma occupied by lymphocytic and histocitic infiltrates in a context of eosinophilic amorphous material, with intense chronic inflammation and ectasia of the peri-lesional lymphatic vessels.

Keywords: Cyst of the Blandin-Nuhn glands; Biopsy; Classical scalpel

Introduction

The Mucocele is defined as a cyst caused by an abnormal accumulation of mucin. They can be classified into extravasation and retention type. Extravasation mucocele develops from a broken salivary gland duct causing spillage into the soft tissues. The tissue reacts and creates a pseudo capsule around the gland. This type of mucocele has a higher incidence in young patients and its development is linked to bad habits like lips and cheek self-trauma. The retention mucocele is caused by a stenosis or a complete obliteration of the duct that results in a decrease or absence of glandular secretion [1,2]. The mucocele could appear as a bluish, soft, and transparent cystic swelling frequently resolves spontaneously. The color of the mucocele depends on its size.

The most frequent area of development appears frequently on the lower lip followed by the tongue, buccal mucosa, and palate [1,2]. A rare development area for the mucoceles is the Blandin-Nuhn's glands. These particular types of glands are localized on the tip of the ventral surface of the tongue on its mean line. The Blandin-Nuhn's mucocele is also called Nuhn's Cyst. In a retrospective trial, Harrison et al. observe the localization of 400 mucoceles, only nine of which grow on the tongue's mucosa. This amount represents only 2.3% of the total of mucoceles. According to Saza et al. and Jinbu et al., only 9-10% of mucoceles develop from the Blandin-Nuhn's glands [3-7]. Its incidence is higher in young

people and especially in women. The main etiological factor for the development of Nuhn Cyst is the trauma of the duct and its subsequent stenosis or complete obliteration [6,8]. Clinically, they are considered quite unusual and could be confused with other oral lesions such as venous varices, vascular lesions, polyps, and squamous papillomas [6]. Its treatment is different from a normal mucocele because the gland does not have a liner capsule and leans directly on the muscular tissue [9]. This article presents a case of a Nhun Cyst removal.

Material and Methods

A 16-year-old female patient, in good general health, came to our attention reporting the recurrence of a circumscribed neoformation localized on the apex of the ventral surface of the tongue. The patient reported a prior surgical excision of an oral lesion in the same anatomical area. On the clinical records, the first excisional tissue sample was described as a grayish-white color oral lesion with a diameter of 4 mm. The pathologist's diagnosis was mucoid cyst. The clinical examination highlighted the presence of a normochromic pedunculated popular neoformation of 5 mm in diameter on the tip of the ventral surface of the tongue on the middle line. The neoformation was asymptomatic, the patient didn't report pain or bleeding (Figures 1-2).

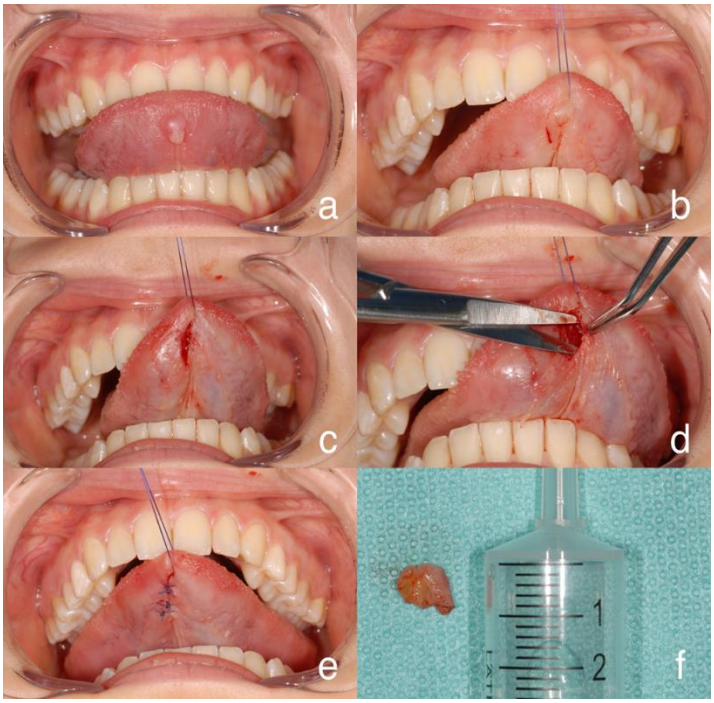

Figure 1: *Enucleation of the Nuhn Cyst conducted by blunt dissection up to the muscle plan.*

Surgical excision was performed. After a rinse with chlorhexidine 0,2% mouthwash and an injection of mepivacaine 2% with adrenalin 1:100.000, the excision was carried out through a lozenge incision. The enucleation of the mucocele was conducted by blunt dissection with iris scissors up to the muscle plan. This aspect is very important to avoid relapses, focusing on the removal of all the small glands found in the surgical field.

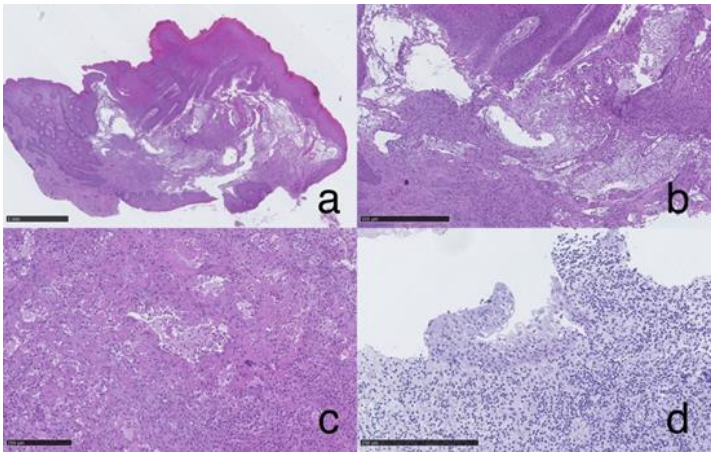

Figure 2: *Histological sections of the mucocele characterized by intense inflammatory infiltrate and duct stenosis.*

Vicryl 4/0 sutures were finally applied. The tissue sample was put in a 35-40% of formaldehyde solution and sent to the pathologist. An antiseptic therapy with chlorhexidine 1% gel was prescribed 3 times a day for 10 days and Paracetamol 1g only in case of need as a pain killer. After 7 days the tissue appears normochromic, neurotrophic, and normohydrated, the stitches were removed.

Results

The histological report confirmed the clinical diagnosis of mucocele, observing oral mucosa with stroma occupied by lymphocytic and histiocytic infiltrates in a context of eosinophilic amorphous material, with intense chronic inflammation and ectasia of perilesional lymphatic vessels.

Discussion

Blandin Nuhn mucoceles can be treated in different ways: surgical excision, marsupialization, cryosurgery, laser ablation, and steroid injections [9]. The authors preferred to avoid this last and more conservative solution, considering that in this case the mucocele was a relapse of a precedent lesion and wanted to completely eliminate the neoformation, which can otherwise lead to irritation and discomfort to the patient. Other solutions, such as marsupialization are more appropriate in larger mucoceles or when the surgery would be too invasive and dangerous for the patient. In this case, the dimensions of the cyst were modest, for this reason, surgical excision was carried out. Excision of the mucocele may have relapsed after the surgery. The site in which recurrence are most frequently developed is the ventral surface of the tongue [10]. No significant difference in relapse rates was

observed comparing the different surgical procedures according to Yun-Jeong Choi [10-13].

Conclusion

Surgical removal of the mucocele is the first-choice treatment; removal of the traumatic aetiological agent is an alternative conservative therapeutic treatment. It is indeed very important to identify them in order to provide complete excision of the Blandin-Nuhn gland and avoid relapses.

Conflict of Interest

The authors declare that they have no conflict of interest.

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Informed Consent

The authors declare that informed consent has been obtained from the patient for publication of the case, including photographs.

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