Mucocele Originating from the Blandin-Nuhn Glands
A Case Report

Клиничен случай

Въведение

Жлезите в предната част на езика (също така наречени апикални жлези) представляват дълбоко разположени серомукозни жлези, които са разположени близо до върха на езика, от двете страни на езичния френулум. Те се откриват по долната му повърхност, пакетирани от мускулни влакна, произхождащи от мускулите Styloglossus и Longitudinalis inferior. Тези жлези са с размери между 12 мм и 25 мм на дължина и приблизително 8 мм на ширина, като всяка се отваря чрез три или четири канала по долната езична повърхност на върха на езика. В литературата те често се наричат жлези на Blandin–Nuhn.

Abstract:
Mucocele is a common, benign, mucous containing cystic lesion of the minor salivary glands in the oral cavity, resulting from the retention or extravasation of mucous into the surrounding tissues of lamina propria. They occur in various anatomical locations but the occurrence in the ventral aspect of tongue is rarely seen.

Keywords: Mucocele, Extravasation, Retention, Glands of Blandin-Nuhn, Ventral aspect of tongue.

Introduction

Anterior lingual glands (also called apical glands) are deeply placed seromucous glands that are located near the tip of the tongue on each side of the frenulum linguae. They are found on the under surface of the apex of the tongue, and are covered by a bundle of muscular fibers derived from the Styloglossus and Longitudinalis inferior. They are between 12 and 25 mm. in length, and approximately 8 mm. wide, and each opens by three or four ducts on the under surface of the tongue's apex. In the literature, these glands are often called glands of Blandin–Nuhn.
Mucoceles are common cystic lesions in the oral cavity. However, mucoceles located on the ventral surface of the tongue originating from anterior lingual salivary glands are rare\(^1\). It is nodular, and/or vesiculobullous lesion, bluish red in color and flabby in consistency. Two types of mucoceles occur based on the histologic features of their wall: a extravasation mucocele formed by mucous pools surrounded by granulation tissue (92%) and a retention mucocele with an epithelial lining (8%). The mucoceles are usually asymptomatic and relatively small in size ranging from 2mm in diameter to 20mm. Sometimes they can grow relatively large enough to cause feeding difficulties in babies or difficulty in speech and mastication in adults\(^8\).

Mucocele can occur at any region in the oral mucosa where the minor salivary glands are present, but they occur more commonly on the lower labial mucosa\(^4\), followed by the buccal mucosa, on the anterior ventral tongue and the floor of the mouth. When the mococele occurs on the floor of the mouth, the lesion is referred to as a Ranula\(^4\).

**Case Report**

A 12 year old male patient reported to this department with the chief complaint of a swelling in the lower aspect of the tongue for the past 2 months with no previous history of any trauma. The patient also reported previous attempt the formation to be treated surgically 2 weeks ago by a dentist but it originated again at the same place almost immediately.

On Intraoral examination, a solitary, well defined, painless swelling, measuring about 7×7 mm. was present in the ventral surface of the tongue. There was no puss or blood discharge from the formation. It was soft in palpation normal in colour (Picture № 1).
Взетата пълна кръвна картина установи нормални стойности на всички кръвни показатели. Въз основа на анамнезата и клиничния преглед бе поставена работна диагноза мукоцеле, а в диференциално-диагностичен план се взеха предвид диагнози като травматичен фибром, липом и гранулозно-клетъчен тумор. Под обща анестезия се извърши радикална ексцизия (Снимка № 2) и материалът бе изпратен за хистологично изследване (Снимка № 3). Хистологичната диагноза откри мукоцеле на малка слюнчена жлеза и пиогенен гранулом.

Complete haemogram was done and all parameters were within normal range. Based on the history and clinical examination a provisional diagnosis of mucocele was made and a differential diagnosis of traumatic fibroma, lipoma, granular cell tumour was considered. Radical excision was performed under general anaesthesia (Picture № 2), and the specimen was sent for histopathological examination (Picture № 3). Histopathological study revealed mucocele of a small salivatory gland and pyogenic granuloma.
Discussion

The Blandin-Nuhn glands are a group of small mixed mucous and serous salivary glands situated on both sides of the midline of the ventral aspect of the tongue arranged as a horse shoe shaped masses surrounded by lingual musculature.

There are two types of mucocele in the literature: 1. Extravasation, 2. Retention type. The extravasation type is a pseudocyst without definite wall caused due to mechanical trauma to the excretory duct of the salivary glands. This leads to the rupture of the duct, with consequent extravasation of mucin into the surrounding soft tissues. Retention mucoceles are formed by dilation of the duct secondary to its obstruction by a sialolith or by dense mucosa. Females are more affected than males by ratio of 4:1.

Sugerman et al. stated that the mucocele of the Blandin-Nuhn glands are clinically similar to vascular lesions, pyogenic granulomas, polyp, and squamous papilloma, depending on the vascularization degree and the atrophy of the acinus. Differential diagnosis with traumatic fibroma, lipoma, granular cell tumor and lymphangioma must be also considered before starting treatment.

Mucoceles of small size are treated by enucleation followed by careful dissection of the affected minor salivary glands. Larger lesions are managed by marsupialization and micro marsupialization. Cryosurgery, laser ablation, microwave ablation, steroid injections are also useful and can be used as alternative to surgery.
Conclusions

As Blandin-Nuhn mucoceles are uncommon and their clinical appearance could be similar to other lesions, it is important that physicians know their clinical and histopathological features to avoid having them misdiagnosed. Excisional biopsy and histopathological examination always give a definitive diagnosis. The best course of action in these lesions is surgery.

References:
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