

Mucocele of the Glands of Blandin- Nuhn; A Rare Entity - A Case Report

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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. This article reports a case of mucocele of the glands of Blandin and Nuhn in a 13 year old female patient and its management.

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

I. Introduction

Mucocele is one of the most common benign soft tissue lesions present in the oral cavity. By definition a cavity filled with mucin is known as mucocele². They are two types of mucocele: 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. The majority of the retention cyst develops in the ducts of the major salivary glands.

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 mucosa⁵, followed by the buccal mucosa, on the anterior ventral tongue and the floor of the mouth. When the mucocele occurs on the floor of the mouth, the lesion is referred to as a Ranula.²

Mucocele appears as a small, discrete, translucent, soft and painless swelling on the oral mucosa ranging from normal pink to deep blue in colour. This deep blue colour results from tissue cyanosis, vascular congestion associated with the stretched overlying tissues and the translucency of the accumulated fluid beneath it⁵. The variation in the colour depends on the size of the lesion, its proximity to the mucosal surface and the elasticity of the overlying tissues. The diameter of the mucocele varies from few millimeters to centimeters.

When mucocele occurs on the ventral surface of the tongue, tongue thrusting habit may be the aggravating factor, in addition to trauma. This mucocele tends to be more polypoid with a pedunculated base. Due to repeated trauma against the lower teeth, the surface of the mucosa overlying the mucocele may be red and granular or white and keratotic.

II. Case Report

A 13 year old female patient reported to this department with the chief complaint of a swelling in the lower aspect of the tongue for the past 6 months with no previous history of any trauma.

On intraoral examination, a solitary, well defined, pedunculated, painless swelling, measuring about 3×2cm was present in the ventral surface of the tongue, 5cm posterior to the tip of the tongue. The swelling was normal in colour. There was no pus, blood or watery discharge from the swelling. On palpation it was soft in consistency, non tender, and firmly attached to ventral surface of the tongue.

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. Complete haemogram was done and all parameters were within normal range.

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, steroid injections are also useful and can be used as alternative to surgery.

Here as the swelling measured 3×2cm, marsupialization was performed under local anaesthesia and the specimen was sent for histopathological examination.

Histopathological study revealed attenuated lining epithelium of a cyst with underlying stroma showing fibroblast of chronic inflammatory cells composed predominantly of plasma cells admixed with lymphocytes and histiocytes suggestive of mucocele.



Fig 1: Intraoral photograph showing a well defined swelling on the ventral surface of the tongue.



Fig 2: Marsupialization done under Local anaesthesia



Fig 3: Intraoral Photograph showing, Post operative review of the patient after 2 weeks.



Fig 4: H&E stained section shows attenuated lining epithelium of a cyst with stroma showing fibroblast and chronic inflammatory cells.

III. 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. These glands are not encapsulated or lobulated. Each gland measures about 1-8mm wide, 12- 25mm deep and consist of several small independent glands. The glands drains by means of 5-6 small ducts which open near the lingual frenum⁴.

Mucoceles of the glands of Blandin – Nuhn are rare. The first case of mucocele of glands of Blandin Nuhn was reported in 1970 by Heimansohn³. The incidence of mucocele in these glands are predominantly higher in children and females⁷. Females are more affected than males by ratio of 4:1⁶. 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 adults⁷.

There are two types of Blandin – Nuhn mucocele.

1. Submucosal lesion covered with integral mucosa which are chronic and asymptomatic.
2. Protuberant painful swelling with a pedunculated base, and a history of local trauma.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 acinus⁸. Differential diagnosis with lymphangioma must be considered too.

IV. Conclusion

This case is presented to stress upon the importance of both clinical and histopathological examination in the diagnosis of Blandin Nuhn mucocele. Although, Blandin Nuhn mucoceles are uncommon, excisional biopsy and histopathological examination will give a definitive diagnosis.

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