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內文：

- **Purpose** : This study aims to review anatomical, clinical, and pathological concepts as well as to discuss the most adequate therapeutic approach to the mucoceles of the glands of Blandin–Nuhn
- **Discussion** : The glands of Blandin–Nuhn are localized in the ventral part of the tongue, next to the apex in the lingual median plane. Development of a mucocele in this site is rarely seen; besides, as the glands of Blandin–Nuhn are not encapsulated and are directly overlapped to the muscle tissues, their manipulation tends to be different from the other oral mucoceles
- **Conclusion** : As Blandin–Nuhn mucoceles are uncommon and their clinical appearance could be similar to other lesions, it is important that health professionals know their clinical and histopathological features to avoid having them misdiagnosed

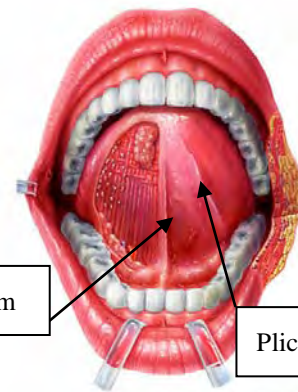
**Introduction :**

1. Mucocele

- common lesion of the oral mucosa
- rupture of a salivary duct and extravazation of the mucin into the surrounding soft tissues
- nodular and/or vesicobullous lesions
- fast growing at the beginning and which can afterwards vary in size.
- bluish color with a translucent aspect and a flabby consistency
- often found in young people
- frequently associated with areas that are subject to traumas
- Site
  - ◆ lower lip(higher incidence)
  - ◆ any region of small salivary glands (tongue, buccal mucosa, superior lip, and palate)

2. Mucoceles of the glands of Blandin–Nuhn

- Uncommon
- Harrison – 9/400 cases
- Jinbu et al. - 9.9%
- Moraes et al. – 48/312 (15.4%)
  - ◆ Tongue as the 2<sup>nd</sup> most frequent site of occurrence.



**Anatomic and clinical characteristics**

- The Blandin–Nuhn glands
  - A compact group of small mixed mucous and serous salivary glands
  - Situated on both sides of the midline of ventral tongue surface

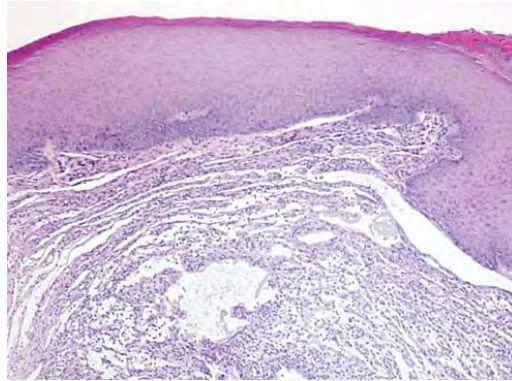
- Embedded in the muscles of the ventral aspect, and re-covered by a thin layer of mucosa
- 5-7 ducts open in the oral cavity medial to the plica fimbriate on the undersurface of the tongue, laterally to the lingual frenum
- Each gland about 8 mm in width and 12 to 25 mm in depth
- *Sugerman et al*
  - mucocèles of the Blandin–Nuhn glands are clinically similar to
    1. vascular lesions
    2. pyogenic granulomas
    3. polyp
    4. squamous papiloma, depending on the vascularization degree and the atrophy of the acinus
- According to author , they have found 2 types of Blandin- Nuhn mucocèles
  - A. Characterized by a submucosal lesion covered with integral mucosa, at 2 to 4 cm in size and of a long-term development with no symptoms
  - B. More protuberant, frequently presents a pedunculated base, and is characterized by painful sensibility and local traumas history
- Mucocèles in these glands:
  - Higher in youth and females
  - Traumatic injury to a duct or ducts with partition of this structure is the most likely etiologic factor leading to the development of these lesions
  - Most probably by the frequent oscillation of the tongue



#### Histopathological characteristics

- ✚ 2 types of benign salivary glands lesions involving either extravasation or retention of mucus.
  1. The extravasation type of mucocèle:
    - Consists in a circumscribed cavity in the conjunctive tissue and in the submucosa, causing an elevation of the mucosa with thinning of the surface epithelium, as if it had been stretched
    - The walls: fibrous conjunctive tissue
    - Presence of granulation tissue, which contains leukocytes and phagocytes.
    - There is **no epithelium lining** the cavity, sometimes the line of fibroblasts limiting the cavity can be confused with flattened epithelium cells
  2. The retention-type lesion
    - **True cyst**
    - Cavity lined by squamous epithelium varying from cubical to columnar or atrophic
    - Alteration of acinus & ducts , with interstitial inflammation or sialadenitis, dilatation of the intralobular and interlobular ducts with mucus accumulation

- Decomposition of the cells of the individual acinus - mucus formation in the area



- ◆ Mucocele consist in mucus extravazation phenomenon with no epithelium lining the mucin collection
  - extravazation-type lesion is more common in young patients
  - most patients diagnosed for mucocele of the glands of Blandin–Nuhn in the literature were under 40 years old.
- ◆ Composition of the secretory products of these glands
  - Not precisely known
  - Seromucous acini in their anterior portion
  - Mucous acini capped by seromucous demilunes in their posterior portion

#### Treatment

- When mucoceles are present in the buccal cavity, they can be easily traumatized
- Source of irritation and annoyance to the patient
- Therefore, they should be surgically removed
- Usually, the surgical excision includes the servicing mucous glands with evacuation of its contents
- Larger lesions
  - marsupialization
  - cryosurgery
  - laser ablation
  - micro-marsupialization.
  - Alternatives to surgery
    - ◆ steroid injections
    - ◆ a method where the cystic cavity is filled with rubber impression material presurgically, improving the visual access for surgical excision
  - *Baurmash*- the technique for managing moderate to large Blandin–Nuhn mucoceles
    - ◆ To completely unroof the lesion along its entire periphery to visualize and remove all of the glands present
    - ◆ Healing without complication or recurrence should follow
    - ◆ Small mucoceles are completely excised and primarily closed
      - healing is rapid and uneventful
- Author:
  - Mucoceles affecting the glands of Blandin and Nuhn should be removed up to the muscle plan, including the small glands found in the surgical field, to avoid recurrence
  - When only marsupialization is performed, the lesion can re-occur as soon as

the draining site is repaired

**Conclusion:**

- Blandin–Nuhn mucoceles are uncommon
- Clinical appearance could be similar to other lesions as vascular lesions, pyogenic granulomas, polyp, and squamous papiloma
  - excision followed by anatomic-pathological examination be performed, to avoid having them misdiagnosed

1	Which of the following statement about mucocele is wrong?
	<p>(A) Mucocele results from rupture of a salivary gland duct and spillage of mucin into the surrounding soft tissue.</p> <p>(B) Lower lip is the most common site for the mucocele.</p> <p>(C) Mucoceles are most common in older people, because they are more likely to experience trauma that induces mucin spillage.</p> <p>(D) Superficial mucoceles have been reported to occur in association with lichenoid disorder, such as lichen planus, lichenoid drug eruptions, and chronic graft-versus-host disease(GVHD).</p>
答案(C)	<p>出處：<i>Oral and Maxillofacial Pathology third edition pg 454-455</i></p> <p>Mucocele are most common in children and young adults.</p>
2	Which of the following statement about the treatment and prognosis of mucocele & ranula is correct?
	<p>(A) Some mucoceles are short-lived lesions that rupture and heal by themselves.</p> <p>(B) Treatment of mucocele is local surgical excision without the removal of adjacent minor salivary glands that may be feeding into the lesion.</p> <p>(C) Marsupialization is often successful for larger ranulas developing from the body of sublingual glands.</p> <p>(D) If sublingual glands is removed, meticulous dissection of the lining of the ranula is still necessary.</p>
答案(A)	<p>出處：<i>Oral and Maxillofacial Pathology third edition pg 456-457</i></p> <p>(B) To minimize the risk of recurrence, the surgeon should remove any adjacent minor salivary glands that may be feeding into the lesion when the area is excised.</p> <p>(C) Marsupialization is often unsuccessful for larger ranulas developing from the body of sublingual gland, and most author emphasize that removal of the offending gland is the most important.</p> <p>(D) If the gland is removed, then meticulous dissection of the lining of the lesion may not be necessary for the lesion to resolve, even for plunging ranula.</p>