

Mucocele of the Minor Salivary Gland

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Overview

Mucoceles are salivary gland cysts that occur in the oral cavity. The onset of mucoceles is typically due to trauma and although these are benign, they have the potential to recur and may be bothersome. Mucoceles are of minor salivary gland origin and emerges due to the disruption of salivary flow/secretions, resulting in the accumulation of mucous within the cyst. Mucoceles tend to spontaneously resolve on their own, however if they are symptomatic, persistent, and do not resolve on their own, surgical excision, marsupialization, injections, or laser ablation may be performed to remove them (Huzaifa and Soni).

Etiology

A mucocele, also known as a mucous cyst, develops due to trauma such as biting the lip, but the gland continues to produce saliva, creating a mucous-filled cavity within an epithelial lining. When the salivary duct is blocked by debris or calculus, this epithelial lined cyst will fill with fluid, resulting in a round, bubble shaped mass (Brown and Egues 245). As previously stated, the most frequent cause of mucoceles is injury to the minor salivary glands usually by mechanical means such as biting, while other causes may be due to chronic inflammation from smoking or trauma from intubation (Huzaifa and Soni).

Clinical Presentation

Clinically, mucoceles are generally asymptomatic, commonly found on the lower lip, the buccal mucosa, as well as the ventral surface of the tongue and present as “A submucosal dome shaped mass that is filled with clear to bluish fluid... [and] are generally less than one centimeter in size” (Brown and Egues 245). These round lesions are typically smaller in size and are mucous and fluid filled cavities. Depending on the depth of the lesion, superficial lesions may appear bluish, while deeper lesions may appear with a clear mucosal color (Grover 354).

Demographic

Mucoceles often affect younger populations, being the most prevalent in people between the ages of 3-20 years old (Huzaifa and Soni). Mucoceles and mucous cysts occur in young adults and are also seen in children. There is no difference in gender or race, meaning it can affect everyone equally, and no singular group is predisposed to developing mucoceles (Brown and Egues 245).

Biopsy/Histology/Radiographs

Although mucoceles can be diagnosed clinically, other tests such as an ultrasound or biopsy can be done to establish a diagnosis or confirm a previously established diagnosis. Histopathologically, mucous cysts are epithelial lined cysts with mucous acini, granulation tissue, with a pooling of mucin in the area, along with inflammatory cells (Unnati Shirbhate et al. 5). Generally, radiographs are not indicated in the diagnosis of oral mucoceles.

Differential Diagnosis

Mucoceles may mimic several other pathologies and should be differentiated. Mucoceles may be misdiagnosed with other intraoral lesions, thus a differential diagnosis should be accomplished with lesions such as fibroma, hemangioma, fibrous hyperplasia, lymphangioma, lipoma, abscess, venous lake, and benign mesenchymal neoplasm (Huzaifa and Soni). Histopathological exams/biopsies can be performed after surgical excision to confirm the diagnosis.

Treatment

Mucoceles and mucous cysts may spontaneously resolve on its own, however they can recur and cause discomfort, which may indicate the need for surgical excision. Though surgical excision is a therapeutic solution, doing so may traumatize the adjacent minor salivary gland,

resulting in possible recurrence. Additionally, other treatments may include micro-marsupialization, intralesional steroid injections, and laser ablation/therapy (Brown and Egues 246). Surgical removal with micro-marsupialization technique is a common treatment, whereas laser therapy is more commonly used for multiple lesions (Grover 355). Post-operative instructions include a soft diet, avoiding hot drinks and tobacco, with a resumption of the patient's normal diet by the 3rd or 4th day. Additionally, patients who present with multiple lesions are advised to avoid trauma or behavior that may exacerbate the development of mucoceles (Grover 355).

Prognosis

The overall prognosis for mucoceles is good. Most mucoceles and mucous cysts can spontaneously resolve on their own. These swellings are typically asymptomatic and painless with no morbidity or mortality associated, however larger lesions may cause discomfort and may affect speech, chewing, or swallowing. With the complete removal of the duct and the affected gland, recurrence rates are low (Huzafa and Soni).

Professional Relevance

As future dental hygienists, mucoceles or mucous cysts are important and relevant because patients can present with these lesions and may be unaware that they have it. Because this lesion is typically asymptomatic and painless, it is important to conduct thorough head and neck exams to be able to adequately detect these swellings. If it is of traumatic etiology, it is necessary to advise the patient on methods to prevent traumatic habits to minimize recurrence. Although most mucoceles are harmless and should go away on its own, it may progress and enlarge in which therapeutic treatments are indicated. The action of salivary glands plays a vital

role in not only digestion, but also oral clearance, lubrication, neutralization of acids, and the protection of the oral cavity.

Citations

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