

Oral Mucocele – A Case Presentation of Minor Salivary Gland

Dr. Vaishali Tile

Senior Lecturer, Department of Oral and Maxillofacial Surgery, SMBT Dental College, Sangamner.

Dr. Deepak Motwani

Professor, Department of Oral and Maxillofacial Surgery, Csmss Dental College, Chhatrapati Sambhajanagar.

Dr. Seema Pendharkar

Associate Professor, Department of Oral and Maxillofacial Surgery, Csmss Dental College, Chhatrapati Sambhajanagar.

Dr. Kedar Kawsankar

Senior Lecturer, Department of Oral and Maxillofacial Surgery, Csmss Dental College, Chhatrapati Sambhajanagar.

Dr. Anuja Deshpande

Private Practice, Chhatrapati Sambhajanagar.

Dr. Shrishti Salunke

Fellow, Punyashlok Ahilyadevi Holkar Hospital, Head and Neck Cancer Institute of India, Mumbai.

Dr. Swamini Wath

Consultant, Fortis Hospital, Mumbai.

Abstract:- A mucocele is a non-cancerous cystic lesion filled with mucus, emerging from the minor salivary glands. This condition is typically known as a mucocele. Clinically, these lesions present as one or more soft, fluctuant nodules, which may vary in color from the normal hue of the oral mucosa to a deep blue. They can occur at any age and are equally prevalent in both males and females, with the highest occurrence noted during the second decade of life. Mucoceles are categorized into two types: extravasation and retention.

Keywords:- Mucocele, Salivary Gland, Extravasation, Retention.

I. INTRODUCTION

Mucocele is classified as a reactive lesion that impacts the salivary glands, typically resulting from obstruction or trauma. These lesions are characterized as pseudocysts, which develop from the accumulation of trapped mucus. [1]

Two varieties of mucocele may manifest: extravasation and retention. Extravasation mucocele results when a salivary gland duct is ruptured, leading to the leakage of saliva into the surrounding soft tissue. In contrast, retention mucocele arises from a reduction or complete cessation of glandular secretion, typically caused by an obstruction in the salivary gland ducts. [2, 3]

The extravasation type is characterized as a pseudocyst lacking defined walls, resulting from mechanical trauma to the gland's excretory duct, which may lead to transection or rupture. This trauma causes the extravasation of mucin into the surrounding connective tissue stroma. Such pseudocysts are commonly observed in the lower labial mucosa, buccal

mucosa, and retromolar area, and they do not possess an epithelial lining. [4, 5] Mucus extravasation initiates a secondary inflammatory response. Numerous patients indicate experiencing intermittent discharge of thick fluid from the affected area. The retention type is less prevalent than extravasation, typically impacting older adults, and is often observed on the upper lip, hard palate, floor of the mouth, and within the maxillary sinus. [6-8] Mucous retention phenomena occur when mucus is trapped in the duct and/or acini, often due to blockages from sialoliths or strictures.

Differentiation based on histology between extravasation cysts and retention cysts is noteworthy: extravasation cysts do not possess an epithelial lining and comprise a mucus collection enveloped by granulation tissue, whereas retention cysts are characterized by the presence of an epithelial lining. [4, 9, 10]

II. CASE REPORT

A 38-year-old male patient presented to the oral and maxillofacial surgery department, expressing concern regarding a small swelling located in the left retromandibular trigon area that had persisted for the last two-three months. History revealed no history of trauma. There was an absence of related discomfort. The previous medical and dental history did not provide any relevant information.

The swelling exhibited a soft consistency, was fluctuant, non-tender, compressible, non-reducible, and non-pulsatile, with no observable increase in temperature (figure-1). A differential diagnosis considered included mucocele, oral haemangioma, oral lymphangioma, lipoma, and soft

tissue abscess. Given the significant size and bluish-purple coloration of the swelling, the patient was recommended to undergo an ultrasound of the affected area. The ultrasound findings indicated a hypoechoic cystic mass measuring 4×3 mm, characterized by well-defined margins, with no internal echoes detected. A definitive diagnosis of mucocele

was confirmed based on the clinical presentation and ultrasound results. (figure-2)

Surgical excision of the mucocele was carried out. Post-operative histopathological diagnosis confirmed it as a mucocele.



Fig 1 Clinical Presentation of Lesion



Fig 2 Ultrasonic investigation

III. DISCUSSION

A mucocele refers to a clinical condition characterized by a swelling resulting from saliva accumulation in a minor salivary gland duct that has been either occluded or severed. [6, 11] This self-limiting cyst, which contains mucous, typically appears in the oral cavity and is known for its relatively rapid development and variable size. [4, 12] The reduction in size of the mucocele may occur due to the rupture of the lesion, leading to a build-up of mucin, or it could result from the reabsorption of saliva, which may result in the lesion reforming. [13-15]

The mucus cyst is characterized by a distinct, fluctuant, and painless swelling of the mucosal surface clinically. Approximately 75% of these lesions measure less than 1 cm in diameter; however, they can occasionally range from a few millimeters to several centimeters in size. Superficial lesions typically exhibit a bluish to translucent appearance, while deeper lesions maintain the normal coloration of the mucosa, with any bleeding into the cyst resulting in a bright red, vascular look. Patients may report a history of recent or previous trauma to the oral or facial area, or they may have a tendency to bite their lip. The differential diagnoses include Blandin and Nuhn mucocele, oral hemangioma, oral lymphangioma, lipoma, and soft tissue abscess. [16-18]

The histopathological classifications of mucocele encompass the prevalent extravasation type and the less frequently observed retention variant. The histopathological characteristics of this lesion vary from acute inflammation associated with mucus accumulation to more developed lesions exhibiting minimal mucus and fibrotic connective tissue. The lesion may present hyperplastic parakeratinized stratified squamous epithelium, small cystic cavities filled with mucin and mucus-laden cells, regions of extravasated mucin encircled by granulation tissue, and sebaceous cells within the connective tissue. [Figure 8]. The identification of salivary gland tissue and sialomucin serves as a diagnostic indicator. The age, gender and oral site differ according to the type of OM's. [18, 19]

Surgical excision, including the removal of accessory salivary glands, has been proposed as a viable treatment option. The management of OM may involve various approaches such as surgical excision, dissection, marsupialization, cryosurgery, electrocautery, the use of carbon dioxide lasers or intra-lesional injection of a sclerosing agent OK-432 or steroid injection. [20] Recurrence may take place, necessitating an additional surgical procedure.

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