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MUCOCELE - A BENIGN LESION OF MINOR SALIVARY GLAND

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Running Title: Mucocele

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ABSTRACT:

A mucocele is benign cystic lesion of minor salivary glands. It is usually seen in the lower lip, followed by the tongue, floor of the mouth (ranula) and buccal mucosa. Mucocele is usually a painless lesion affecting young children, adolescents and adults with no gender predilection. It occurrence may be due to trauma to the duct of the minor salivary gland or any blockade in the duct of minor salivary gland.

Keywords: Mucocele, Diascopy, Laser ablation, Cryosurgery.

INTRODUCTION:

Mucocele are defined as mucus filled cavities, which can appear in the oral cavity, appendix, gallbladder, paranasal sinuses, and lacrimal sac [1,2]. The term mucocele is derived from a Latin word, mucus and cocele means cavity [3]. Two types of mucocele can appear: Extravasation and Retention. Extravasation mucocele results from a broken salivary gland duct and consequent spillage into the soft tissue around this gland. Retention mucocele appears due to decrease or absence of glandular secretion produced by blockage of salivary gland ducts [4, 5]. Here we report a case of mucocele of the lower lip in a female

child, along with emphasis given on its histopathological features and treatment.

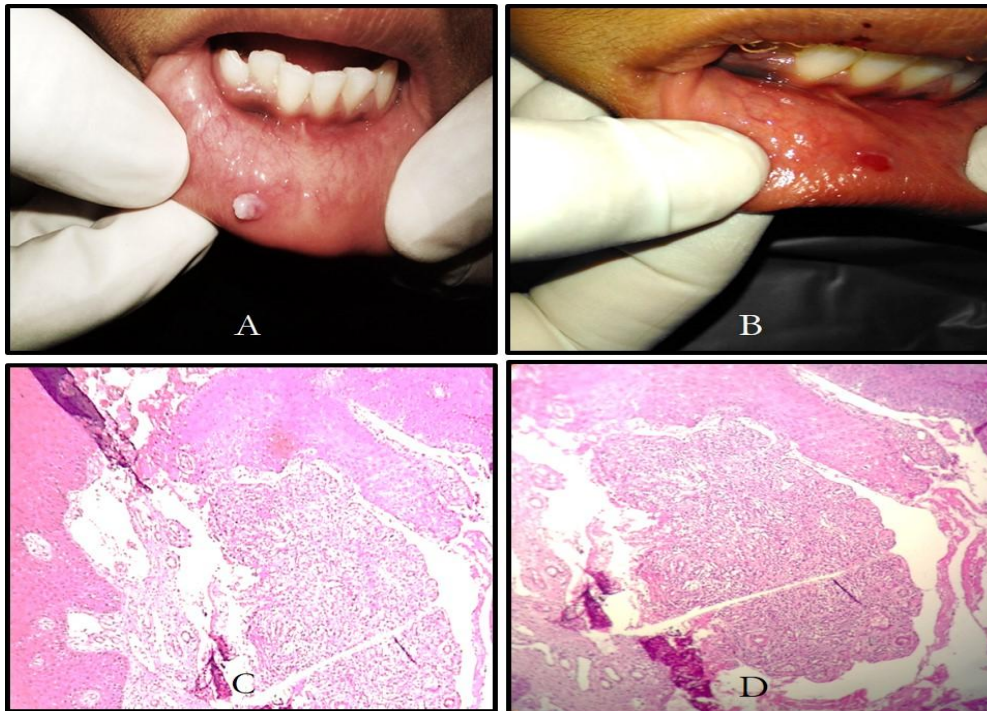
CASE REPORT:

A 10 year old female patient presented with the chief complaint of a growth in the right side of the lower lip since 6 months, which was slow growing in nature and was not associated with any type of pain. Patient gave a history of having lip biting habit. Medical and dental history was non-contributory. Clinical examination revealed a well-defined solitary pale pink colored cylindrical shaped translucent nodular growth with areas of redness seen on the right side of the lower lip towards the

vermillion border. It was 4.0 mm in diameter and 8.0 mm in length. Surface of the lesion was irregular (Figure A). Based on detailed history and clinical examination a provisional diagnosis of Mucocele was made. Diascopy test was performed. After medical evaluation, and signed informed consent from the parents was obtained, an excisional biopsy was performed

under local anesthesia. A local infiltrative anesthesia (2% lignocaine with epinephrine 1: 80,000; one cartridge) was infiltrated around the lesion. Before infiltration, a topical anesthetic gel for 2 minutes was applied. An excisional biopsy was done using a B.P Blade no 11 (Figure B).

Fig. A: Nodular appearance of mucocele of lower lip B. Surgical site after excision



Figures: C and D: Stained sections of excised specimen.

An analgesic was prescribed on the first post operative day to prevent any possible pain that could result and post-operative instructions were given. Excised specimen was sent to department of Oral and maxillofacial pathology for histopathological evaluation. Histopathological section revealed

parakeratinized stratified squamous epithelium, with the adjacent deeper tissue showing an area of spilled mucin surrounded by chronic inflammatory cells (Figures C and D). Considering the clinical and histological findings final diagnosis of superficial mucocele of the lower lip was given.

DISCUSSION:

Mucoceles may be located either as a fluid filled vesicle or blister in the superficial mucosa or as a fluctuant nodule deep within the connective tissue. Spontaneous drainage of the mucin especially in superficial lesions followed by subsequent recurrence may occur. The surface of long standing lesions may show fibrosis [6]. There are three clinical variants suggested: Superficial mucocele that is located directly under the mucosa, classic variant located in the upper submucosa, and deep mucocele located in the lower cornium.

The Pathophysiology of formation of mucocele is not clearly understood, but two etiological factors that can be considered are trauma and obstruction of the salivary gland ducts [7]. Information in the literatures indicated that oral habit such as lip biting or sucking is one of the etiologic factors for the oral lesions such as irritation fibroma and mucocele [8]. Our reported case presented with lip biting habit.

There are various differential diagnosis which include Papilloma, Ranula, Benign or malignant salivary gland neoplasms, Oral Hemangioma, Oral Lymphangioma, Lipoma, Oral lymphoepithelial cyst, Gingival cyst in adults, Soft tissue abscess and Cysticercosis (parasitic infection) [9]. After physical examination of the surface of the lesion in our reported case we had considered papilloma and hemangioma as the differential diagnosis.

Mucoceles may spontaneously resolve, especially in infants and young children. Mínguez et al [10] conducted concluded saying that approximately 44% of mucoceles in children spontaneously resolved after an average of 3 months. Diascopy test should be performed to rule out if the lesion is vascular, non-vascular or haemorrhagic [11]. This test helps in differentiating mucocele from any other hemangioma. Other investigations which can be performed are Fine needle aspiration cytology and excisional biopsy [12]. Diascopy test was performed in our reported case to rule out hemangioma. Marsupialisation will only result in reoccurrence [6]. Surgical excision with removal of the involved accessory salivary gland has been suggested as the treatment of choice. When symptoms are absent aspiration of the lesions and periodic follow up for up to 6 months have been suggested as an alternative to surgery [13]. It is very important that the surgically excised specimen be sent for histopathological analysis to rule out other salivary gland neoplasms. Other treatment approaches such as Laser ablation, cryosurgery, and electrocautery have been used for conventional mucocele with variable success [14, 15].

CONCLUSION:

Mucocele are relatively common benign salivary gland neoplasm. The findings in our present case support the information in the

published literature that the occurrence of Mucocele is mainly due to trauma and habitual lip biting. School awareness programmes should be organised to educate the young children and their parents about one of the consequences of lip biting or sucking. Extra care must be taken for patients undergoing orthodontic treatment. Recurrence can occur if the accessory salivary gland is traumatised during surgical treatment of the lesion. Quality care must be taken while surgically excising the lesion and the causative factors should also be taken care of, minimized or prevented.

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