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MUCOCELE OF LOWER LIP : A SERIES OF 3 CASES WITH REVIEW OF LITERATURE

Dental Science

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ABSTRACT

Oral mucocele is a common salivary gland disorder and second most common soft tissue lesion of oral mucosa. It results from accumulation of mucus due to alteration in the minor salivary gland and traumatic in origin. Mucocele is mucous filled cavities that appear in oral cavity, lacrimal sac, appendix and paranasal sinuses. These are usually present on lower lip and other locations like buccal mucosa & floor of mouth. Clinically they present as soft, bluish, fluctuant, cystic swelling & diagnosis is mainly clinical. Treatment involves surgical removal although marsupilization, cryosurgery, CO2 laser, steroid injections are described in literature. We report a case series of mucocele on lower lip treated successfully by conventional surgical excision of lesion, and no recurrence was observed on follow up of 6 months.

KEYWORDS

Mucocele, salivary gland, mucous, lower lip.

INTRODUCTION

The term mucocele is used to define the subepithelial accumulation of mucous secreted from salivary glands and their ducts in the oral tissues. The term 'mucocele' is derived from a Latin word 'Mucous' and 'cocele' means cavity.[1] Mucocele is 17th most common salivary gland lesion and second most common benign soft tissue lesion seen in oral cavity. [2] They appear as rounded, transparent and bluish colored lesion of variable size. They are mostly asymptomatic, soft in consistency, non tender and fluctuant on palpation. Lower labial mucosa is most commonly affected site, but can develop in buccal mucosa and floor of mouth. Mucocele can arise within a few days after minor trauma and may show episodic fluctuation in size. It presents as two types; extravasation type and retention type but clinically there is no difference. Extravasation phenomenon results when there is spillage of mucin into connective tissue around the gland due to severance of salivary gland duct whereas mucous retention phenomenon is due to retention of mucin which is lined by ductual epithelium .[12]

Case Report 1:-

A 20 years old female patient reported with complaint of painless swelling on lower lip since 4 weeks. Patient gave history of trauma to lower lip due to orthodontic brackets. On intra-oral examination a solitary swelling measuring approximately 1 x 1 cm in size, situated on inner aspect of lower lip, almost 8 mm away from vermillion border was seen. It was soft, oval, fluctuant and painless on palpation. The color was normal as surrounding mucosa. [Fig. 1-A]Based on the clinical appearance and history provisional diagnosis of mucocele was made. Patient hemogram was within normal limit. Diascopy test was negative. Excision was done under local anesthesia by placing incision circumferentially & resectioning was done from base and intermittent sutures were placed [Fig1-B and C] Specimen was sent for histopathological analysis.

The H and E section showed parakeratinized stratified epithelium with few rete ridges. The dense connective tissue stroma showed presence of numerous salivary glands and cystic spaces lined by inflammatory cells. Pale, homogenous basophilic fluid was seen suggestive of mucin. Histopathology confirmed diagnosis of Mucous-retention cyst. Sutures were removed after one week, and healing was normal. The Patient was on follow up to 6 months in regular intervals with no recurrence.

Case Report 2:-

A 25 years old female patient reported to department with chief complaint of swelling on lower lip since 6 weeks. Patient gave positive history of trauma 3 months back and there was fracture of lower central and lateral incisor. (Elli's # 2). No systemic history was given by patient. On intra-oral examination swelling was located on inner aspect of lower lip, measuring 2x1 cm in size. The patient gave history of fluctuation in its size. Swelling was oval, soft, fluctuant, painless with color same as surrounding mucosa. [2-A] Based on history,clinical signs and symptoms, provisional diagnosis of mucocele was given. Routine blood investigations of patient were within normal limit. The lesion was surgically excised with scalpel blade under anesthesia. [Fig 2-B, C] Intermittent sutures were placed and after 4 weeks the healing was uneventful.

Histopathology revealed stratified squamous parakeratinized epithelium and underlying dense fibrous connective tissue stroma. At places homogenous eosinophilic material was seen. Also abundant chronic inflammatory cells, mucinophages were seen in connective tissue stroma. [Fig 4] Histopathologically final diagnosis of mucous retention cyst was given. No recurrence was found on follow up after 6 months.

Case Report 3:-

A 23 years old male patient reported to department of Oral Medicine and Radiology with chief complaint of swelling on lower lip since 4 weeks. Patient gave positive history of lip biting, and no significant medical history. On intra-oral examination solitary, round swelling was present on inner aspect of lower lip, 3-4 mm away from vermillion border measuring 1x1 cm in size. Color was bluish pink. [Fig. 3-A] On palpation swelling was soft, fluctuant, non-tender with no rise in temperature. Co-relating clinical features and history of lip biting, the lesion was provisionally diagnosed as a mucocele. Patient's hemogram was normal. Excision was done under local anesthesia [Fig.3-B]. Specimen was sent for histopathological investigation, when overall picture was suggestive of mucous retention cyst. One week later sutures were removed and healing was observed normal. No recurrence was noted on follow up after 6 months.

DISCUSSION

Mucocele is a common lesion, the incidence being as high as 2.5 per 1000 patients, frequently seen in second decade of life and may occur in children and young adult due to more chances of trauma. Some

studies reported that mucocele has slight female predilection.[4]

Yamasoba et al 1990 stated two etiological factors of mucocele; traumatism and obstruction of salivary gland ducts.[4] Parafunctional habits such as lip biting is most contributing factor for oral mucocele. In our case series one patient had history of trauma, another patient reported habit of lip biting while one patient was undergoing orthodontic treatment who complained of continuous trauma to lip mucosa due to orthodontic brackets.

Physical trauma can cause leakage of mucin into surrounding submucosal tissue. Clinically mucocele appears as isolated lesion, dome shaped or oval shaped swelling .It is usually painless, translucent, color ranging from pink to deep blue. The deep blue color is caused by vascular congestion and cyanosis associated with stretched overlying tissue and translucent color of accumulated mucin below. The variation in color depends on the size of lesion; its proximity to mucosal surface.[5, 6] Mucocele of minor salivary gland are rarely larger than 1.5 cm in size and are superficial always. Mucocele found in deeper areas are usually larger.[5]

A study by Bagan et al on 25 mucoceles showed that 5 % were retention type, whereas the 95% were extravasation type.[7] Diagnosis is mainly based on clinical findings. The appearance of mucocele is pathognomic. Location of lesion, history of trauma, bluish color and consistency are important factors to be considered. [8]

Conventional treatment consists of surgical exicision of surrounding mucosa and glandular tissue below in case of small mucocele. Special care should be taken to avoid injury to adjacent glands and ducts and while placing sutures to avoid recurrence of lesion.[5] In case of large mucocele marsupalization can be done to avoid injury to vital structures. According to Pedron et al, mucocele can be treated by cryotherapy, carbon dioxide laser surgery, Nd:Yag laser vaporization.[9] The diode laser can be used for the lesion that contain vascular area,that result in post treatment hemorrhage.[10] Some authors have suggested use of intralesional steroid injection.[13]

The excised tissue needs a histopathological analysis to confirm diagnosis and rule out salivary gland tumor.

In one study by Yamasoba et al; 70 mucoceles were removed from lip and two lesions reappeared.[4] Huang et al in study of 82 patients suffering from mucocele on lower lip were treated by CO_2 laser sand 2 lesions recurred afterwards and one patient suffered from temporary parasthesia.[11]

In our case series all 3 cases were treated by conventional surgical exicision,where healing was uneventful and no recurrence was noted on follow up after 6 months in all three patients.

CONCLUSION:-

Mucocele are common oral soft tissue lesions which are benign and self limiting in nature. Most of literature reported that mucoceles are developed following trauma and habitual lip biting. Surgical exicision with dissection of surrounding tissue and contributing minor salivary gland acini proved to be successful with least recurrence. Patients under orthodontic therapy should be monitored for areas of irritation in oral mucosa.

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Fig 1A

Fig 1B

Fig 1 C

Fig 2 A

Fig 2 B

Fig 2 C

Fig 3 A

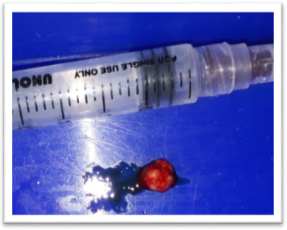
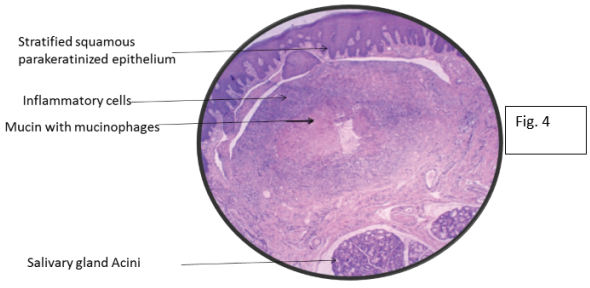


Fig 3 B



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