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MANAGEMENT AND HISTOPATHOLOGICAL ASPECTS OF ORAL MUCOCELES

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Abstract:

The oral mucocele, an additional change in the salivary gland, is a benign tumor and one of the most common lesions in the mouth. These changes may occur in other parts of the body, but they are more common in the mouth, and the most common place is the lower lip, followed by the cheek and bottom of the mouth. Oral mucocele are basically pseudocysts resulting from the combined accumulation of mucus, prevalence of oral mucocele, 2.5 lesions per 1000 population in America, in Pakistan 0.11% and India 0.08% respectively. They constitute the 17 most common lesion in the mouth. Histologically, the mucocele is divided into two categories: mucocele extravasation mucocele and mucous retention mucocele.

Aim: *This descriptive retrospective study was conducted at the Department of Oral and Maxillofacial Surgery to determine the spectrum of oral mucoceles, including its age, place, sex, and clinical, histopathological types of oral mucocele.*

Place and Duration: *In the Oral and Maxillofacial surgery department of Punjab Dental Hospital for one year duration from January 2019 to January 2020.*

Methods: *Reports from 54 patients from 1 year were included in the study. The age range of these patients ranged from 12-50 years with an average of 29.25 years and SD +11.57.*

Results: *The most common type of oral mucocele was extravasation (70%) and was most common in the lower lip and younger patients. Patients were treated with local excision / enucleation under local or general anesthesia.*

Key words: *Oral mucocele, histopathology, extravasation, retention.*

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INTRODUCTION:

Mucocele of the oral cavity, additional damage to the salivary gland, is a benign tumor and a common lesion in the mouth. Mucocele of the oral cavity is characterized by one or more smooth, smooth, translucent, painless and fluctuating spherical nodules, which are usually asymptomatic. These changes can be found in other parts of the body, but they are more common in the mouth, and the most common area is the lower lip, followed by the cheek and bottom of the mouth. Diagnosis of this damage can only be made on the basis of clinical results. Mucocele of the mouth occurs due to injury or blockage of the glands. Basically, these are pseudocysts resulting from the accumulation of mucocele. The occurrence of oral mucocele was 2.5 per 1000 inhabitants of America and 0.11% in Pakistan and 0.08% in India, respectively. They constitute the 17 most common lesion in the mouth. Histologically, the mucocele is divided into two categories: extravasation mucocele and retention mucocele. The phenomena of mucocele extravasation are usually observed in the small salivary glands on the lower lip and are common in young adults and children. In the connective tissue space, mucocele without epithelial coating accumulates. The phenomenon of retention of the mucocele is true epithelial cysts in the older age group, and the main salivary glands fall into this category. Mucocele of the oral cavity is a dome-shaped enlargement with a hard epithelium. Since benign lesions can distinguish benign precancerous lesions, histopathological confirmation and surgical excision are important and necessary, therefore clinical appearance related to size, location, etiology and symptoms is very important. Mucocele extravasation occurs as a result of biting habits of the lips of the mucocele, and mucus retention occurs due to blockage of the mucocele salivary gland, these changes return even after healing. After a few weeks or months, more fluid accumulates and lesions return. This filling, destruction and collapse cycle lasts for many months. The size of the mucocele varies from a few millimeters to several centimeters, depending on its location. Histologically, there are two patterns, one is a solid epithelial duct that expands and forms a cyst that is filled with inflammatory residues or extravasation mucin in the stroma, which is inflammatory infiltration and histiocyte granular tissue. Fine needle aspiration cytology and radiography may exclude differential diagnosis such as hemangioma, lipoma, soft tissue abscess, oral lymphoma, benign and malignant salivary gland tumors, gingival cysts and pyogenic granulomas, and glandular cyst based on histopathology. The purpose of this study is to emphasize the importance of proper management in histopathological diagnosis in these common oral pathologies. Histological analysis plays a very important role in confirming the diagnosis of oral mucocele. It has been shown in the literature that the type of extravasation is associated with a higher number of relapses.

METHODOLOGY:

This descriptive study was conducted at the maxillofacial surgery department of Punjab Dental Hospital for one year duration from January 2019 to January 2020. After obtaining the consent of the hospital's examination board, the clinical documentation was collected. The duration of the study was 1 year. Patient descriptive data were compared and evaluated with data previously adopted in the literature. The purpose of this study is to determine the spectrum of oral mucocele, including clinical and histopathological types of oral mucocele and its effect on the protocol of management. Variables such as age, gender, type, location and histopathological diagnosis were examined in this study. The histopathological difference of the change was observed when biopsy records were taken and their dimensions were taken from specific clinical records. The data was introduced in SPSS 20 version and the results were analyzed using descriptive statistics, and the results were presented using tables and charts.

RESULTS:

A total of 54 patients were included in the study. A detailed examination of the patient's documentation was performed and the age, sex, location, histopathological examination of oral mucocele of these patients were recorded.

TABLE 1: SITE DISTRIBUTION OF ORAL MUCOCELE

Site	extravasation	extravasation	%
Lower lip	29	2	57.7
Floor of mouth	4	12	29.6
Buccal mucosa	0	1	1.8
Ventral tongue surface	3	0	5.5
Upper lip	2	1	5.5
Total	38	16	100

The age range of these patients was 12-50 years, mean age was 29.25, and SD + 11.57. Then men were affected more with a male to female ratio of 2: 1 (36 men and 18 women). "Figure 1.

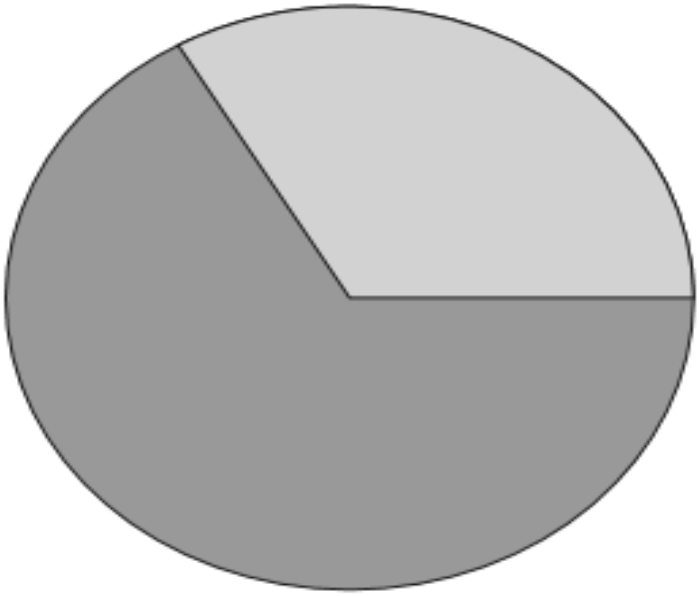

Fig 1: Age wise distribution of oral mucocele

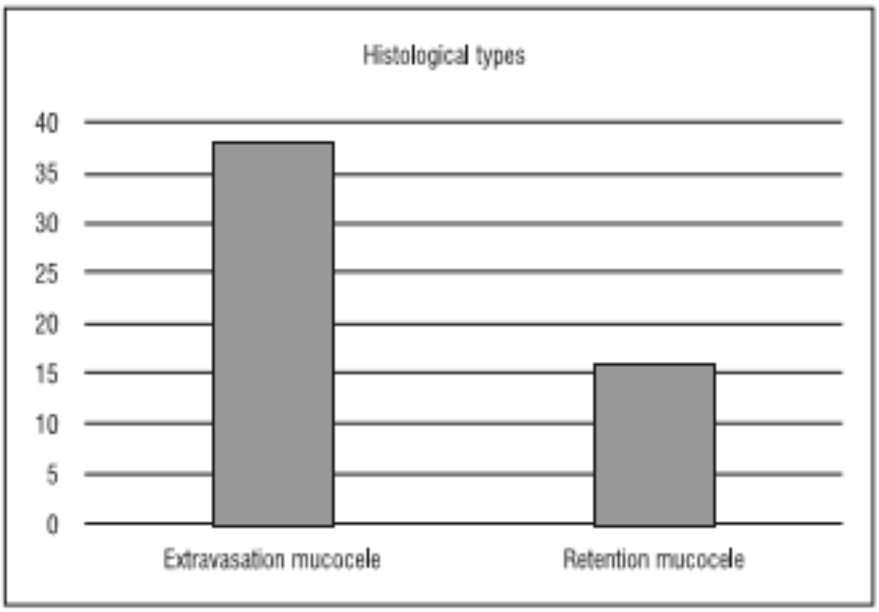

Fig 2: Histological types of oral mucocele

Histopathological results of the oral mucocele of these patients are retention mucocele and a total of 54 extravasations. 38 patients (70%) were reported as extravasation mucocele, and 16 (30%) as retaining mucocele in Figure 2. The microscopic difference between the two histological types of mucocele was that extravasation-type mucocele had a full stroma. Along with granulation tissue, there were few inflammatory infiltrates and several histiocytes without epithelial lining. The retention type had a hard-epithelial lining filled with mucin and inflammatory debris. The most common localization was the lower anterior lip surface near the incisor tooth area in extravasation-type mucocele and the base of the oral cavity in retention-type mucocele, followed by cheek mucocele, abdominal tongue surface and upper lip. None of the patients was registered as a rare histological type.

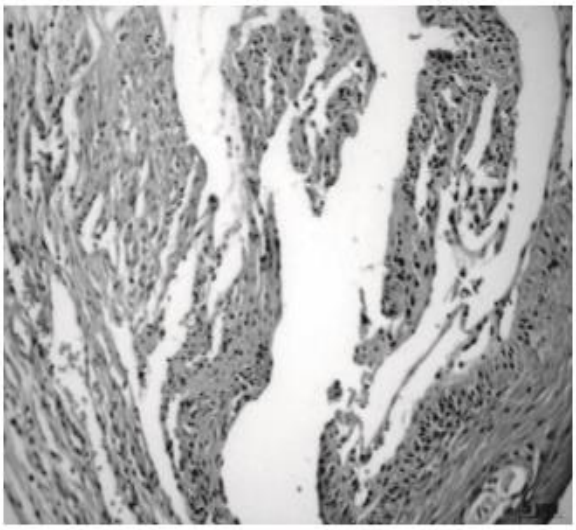

Fig 3: Photomicrograph of retention type mucocele

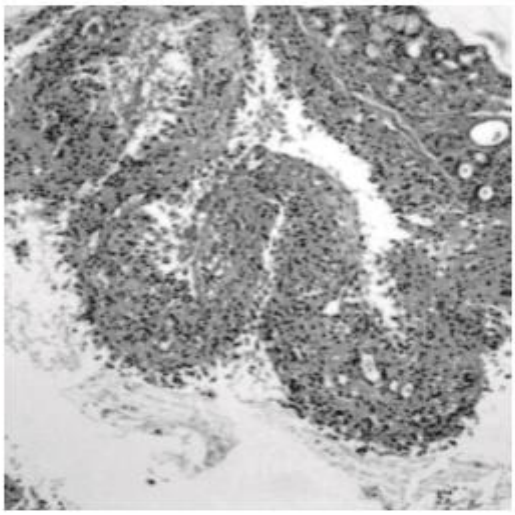

Fig 4: Photomicrograph of extravasation type muco-cele

DISCUSSION:

Mucocele of the oral cavity occurs due to the accumulation of saliva from a blocked or small salivary canal. Has a fast, variable and self-limiting beginning. Most oral mucocele has no epithelial lining or has granulation tissue. Mucocele are single or multiple and burst and leave painful erosions that heal within a few days. Clinically, oral mucocele is the superficial mucocele located under the mucocele or the classic mucocele located at the top of the sub-mucocele. These are vesicles with fluid-filled cavities located deep in the connective tissue and in the surface layer of the mucocele or nodules. Bluish swelling is visible in the superficial layer, and the normal-looking mucocele appears to have deeper changes in the layer. Mucocele vary in size and can remain unchanged for months. The diameter of these injuries can range from a few millimeters to several centimeters. In the absence of treatment, these changes can vary significantly to very small or very large sizes, depending on the rupture and production of mucin. Mucocele are often caused by lip bites or trauma leading to rupture of the salivary canal. Disruption of the excretory duct of the salivary gland causes saliva to flow into the surrounding tissue. Oral mucous membranes affect all age groups, but most often this applies to the youngest age group and most concerns the second decade of life. In a study by Yamasoba et al. Over 65% of reported patients belonged to the age group of 20 years. In this study, most patients with extravasation mucocele were between 12 and 20 years old. Olevera et al. Reported in the study, the ratio of men to women was 1.07: 1. In this study, men were also more affected than women with a ratio of 2: 1. 82% of the mucocele on the lower lip were of the type of extravasation, 8% on the cheek mucocele and 1 % on the palate. Another study by Ellis et al. It was shown that 33% of extravasation mucocele was found on the lower lip, 77% on the cheek mucocele and 4% on the upper lip. In this study, the most common region of the oral mucocele was the lower lip. Types of mucocele

extravasation were common. Surgical removal of the lesion is common, with adjacent patches of small salivary glands. Extravasation mucocele, which is superficial, is treated automatically and does not require any treatment. It has a low relapse rate and is the result of residual damage to the salivary glands requiring muscle stretching surgery. When applying seams, this should be done very carefully so as not to damage adjacent structures that can cause relapses. The results of this study were more or less similar to previous studies. Most oral mucocele occurs due to trauma and biting of the lips. Orthodontic patients should also be carefully monitored for local injuries.

CONCLUSION:

Early diagnosis and histopathological typing of the oral mucocele is very important because it develops to large sizes that affect the quality of life (QOL) and the aesthetics of the patient. Surgical treatment of recurrent mucocele due to excessive peripheral fibrosis is difficult and makes surgical dissection more difficult.

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