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Retrospective analysis of benign and premalign lesions in the oral cavity

Benign ve premalign oral kavite lezyonlarının retrospektif analizi

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Abstract

Background The aim of this study was to retrospectively analyze the patients who were biopsied from the oral cavity and histopathologically diagnosed as benign and premalignant.

Methods In this study, we retrospectively examined histopathological diagnosis, sex and age groups of 67 patients who underwent incisional or excisional biopsy of the oral mucosa and diagnosed as benign or premalignant in the otorhinolaryngology clinic of a tertiary hospital between January 2014 and January 2019.

Results A total of 67 patients were included in our study, 33 (49.3%) were male and 34 (50.7%) were female. The mean age of the patients was 44.90 ± 19.77 years. According to age distribution, numbers of patients in 10-20, 21-30, 31-40, 41-50- 51-60, 61-70 and 71-80 age groups were 12 (17.9%), 8 (11.9%), 6 (9%), 9 (13%), 16 (23.9%), 10 (14.9%) and 6 (9%), respectively. The most common benign lesions were pyogenic granuloma (10.4%) and radicular cyst (11.4%).

Conclusions As a result, biopsies should be performed to exclude malignancy in the oral cavity. In addition, the diagnosis of rare lesions is important in terms of treatment management.

Key words: *oral mucosa, oral cavity, biopsy, histopathological diagnosis*

Özet

Amaç Bu çalışmada oral kaviteden biyopsi yapılan ve histopatolojik olarak benign ve premalign tanı koyulan hastaların retrospektif olarak ayrıntılı analizlerinin yapılması amaçlanmıştır.

Yöntem Çalışmamızda Ocak 2014-Ocak 2019 tarihleri arasında üçüncü basamak bir hastanenin kulak burun boğaz hastalıkları kliniğinde oral mukozadan insizyonel yada eksizyonel biyopsi yapılan ve histopatoloji tanısı benign yada premalign olarak değerlendirilen 67 hastanın retrospektif olarak histopatolojik tanı, cinsiyet ve yaş grupları dağılımları incelenmiştir.

Bulgular Çalışmamıza 33' ü (%49.3) erkek, 34' ü (%50.7) kadın olmak üzere toplam 67 hasta dâhil edildi. Hastaların yaş ortalaması 44.90 ± 19.77 olarak tespit edildi. Hastaların yaş dağılımları değerlendirildiğinde 10-20 yaş aralığında 12 (%17.9), 21-30 yaş aralığında 8 (%11.9), 31-40 yaş aralığında 6 (%9), 41-50 yaş aralığında 9 (%13.4), 51-60 yaş aralığında 16 (23.9), 61-70 yaş aralığında 10 (%14.9) ve 71-80 yaş aralığında 6 (%9) hasta tespit edildi. En sık saptanan benign lezyonlar piyojenik granülom (%10.4) ve radiküler kist (%11.4) olarak tespit edildi.

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Sonuç Sonuç olarak özellikle oral kavitede maligniteyi ekarte etmek için biyopsiler yapılmalıdır. Ayrıca nadir lezyonların teşhisi, tedavi yönetimi açısından önemlidir.

Anahtar kelimeler: *oral mukoza, oral kavite, biyopsi, histopatolojik tanı*

Introduction

Oral cavity is composed of gingiva, retromolar region, buccal and palatal mucosa, mouth base and lips.[1,2] Pathological changes in the oral cavity tissues can be seen in different morphological and histopathological structures. Determining the right clinical diagnosis can sometimes be difficult. Many systemic diseases may lead to similar lesions in the oral cavity.[2] Factors causing changes in the oral mucosa include infections caused by bacteria, fungi, viruses, parasites and other agents; physical and thermal injuries, changes in the immune system, systemic diseases, neoplasms, trauma and aging.[3,4] In particular, long-term habits such as smoking tobacco or alcohol may cause precancerous or cancerous lesions.[5]

Oral mucosal lesions may be painful or painless. In addition, ulceration and indurated areas are common. Painful and ulcerated lesions may indicate the need for detailed evaluation of malignancy.[1] Appropriate treatment in oral cavity lesions begins with correct diagnosis. The definitive diagnosis of oral cavity lesions can be established by histopathological examination and the gold standard is the diagnostic method.[2] Irritation fibroma, giant cell fibroma, pyogenic granuloma, mucocel, lipoma, chronic inflammation, oral lichen planus are mainly benign lesions. Squamous cell carcinoma and basal cell carcinoma are the most common malignant diseases. Retrospective studies to assess the distribution of oral mucosal lesions are useful and important to assist in predicting the prevalence of a disease in the population and thus in identifying the high-risk subpopulation and in preventive and curative services.[1]

The biopsy shows the histopathological features of any lesion and is necessary for a definitive diagnosis. Detection of malignant or premalignant lesions in biopsy materials is also important for prognosis. Biopsies from lesions may also facilitate the identification of treatment strategies. It may contribute to the evaluation of the effectiveness of treatment.[6]

In this study, we aimed to retrospectively analyze the patients who were biopsied from the oral cavity and histopathologically diagnosed as benign and premalignant.

Methods

For this study, first of all, necessary permissions were obtained from the local ethics committee of our hospital.

In our study, a retrospective analysis of the patients who admitted with a complaint of swelling or pain in the otorhinolaryngology outpatient clinic of a tertiary hospital was performed and the patients who had pathology in the oral cavity and who had incisional or excisional biopsy were performed. Sixty-seven patients with histopathological benign or premalignant diagnosis were included in our study between January 2014 and January 2019 for oral cavity biopsy. Patients diagnosed with malignancy were not included in the study. Patients included in the study were evaluated according to the diagnosis, gender and age groups.

SPSS 21.0 was used for statistical analysis in this study. Descriptive statistical methods (mean, standard deviation, frequency and percentage distributions) were used to evaluate the data.

Results

A total of 67 patients were included in our study, 33 (49.3%) male and 34 (50.7%) female. The mean age of the patients was 44.90 ± 19.77 (min: 10, max: 80). When the age distribution of the patients were evaluated, 12 were (17.9%) in the 10-20 age range, 8 (11.9%) were in the 21-30 age range, 6 (9%) were in the 31-40 age range, 9 (13.4%) were in the 41-50 age group, 16 (23.9%) were in the 51-60 age group, 10 (14.9%) were in the 61-70 age group, and 6 (9%) were in the 71-80 age group (Table 1).

In the evaluation, the dentigerous cyst 3, epithelial dysplasia 1, epithelial hyperplasia 3, epithelial inclusion cyst 2, epulis fissuratum 3, fibroepithelial papilloma 4, fibroepithelial polyp 2, granulation tissue 3, pyogenic

granuloma 7, irritation fibroma 4, cavernous hemangioma 3, chronic actinic chelitis 1, chronic inflammation 7, lymphangioma circumscriptum 1, lichen planus 4, leukoplakia 1, monomorphic adenoma (basal cell adenoma) 1, mucocele 3, odontogenic keratocyst 1, radicular cyst 8 and squamous papilloma 5 were detected in patients. In addition, histopathological diagnoses of the patients according to age groups were given in Table 2.

Table 1. Distribution of age groups

Age group	Number	Percentage (%)
10-20 years	12	17.9
21-30 years	8	11.9
31-40 years	6	9.0
41-50 years	9	13.4
51-60 years	16	23.9
61-70 years	10	14.9
71-80 years	6	9.0
Total	67	100

Discussion

The prevalence of oral mucosal disease is higher in elderly patients than in younger patients. Studies have demonstrated the relationship between oral mucosal disorders and aging.[7] In this study, the oral mucosal lesions were found to be high in 40-70 age group (52.2%). In a different study, it was found that this age group was between 40 and 61 years of age.[8]

However, age is not the only factor associated with oral mucosal diseases.[4] Most population-based studies focus on the oral mucosa disease, the incidence and prevalence of malign and premalign disease. However, few studies have examined general mucosal lesions or mucosal changes. For example, a study conducted in Sweden reported 60 different oral mucosal lesions.[9] In a different study, they also reported all premalign and benign lesions found in the screening and approximately 50% of the reported lesions were diagnosed with keratosis.[10] Recording of all oral mucosal lesions detected during physical examination clearly leads to a high prevalence of oral mucosal disease.[5]

This retrospective study was performed to evaluate the histopathological analysis of the oral cavity lesions. A total of 67 oral cavity lesions were evaluated during the study. In one study, it was shown that oral cavity lesions were more common in women.[2] However, there is no significant gender difference in this study.

In this study, the oral mucosal lesions were found to be high in 40-70 age group (52.2%). In a different study, it was found that this age group was between 40 and 61 years of age.[8] In our study, pyogenic granuloma (10.4%) and radicular cyst (11.4%) were the most common lesions. In one study, the rate of pterygiic granulomas ranged from 5% to 19%.[1,11]

In our study, the number of patients diagnosed with chronic inflammation was 10.4%. In other studies this rate varies between 10% and 55%.[12,13]

In this study, the rate of hemangioma was 4.5%. In other studies, the rates of oral cavity hemangioma vary between 11% and 30%.[12,14] Another lesion in our study was squamous papilloma. The incidence of squamous papilloma was 7.5%. In other studies, this rate was found to be between 2% and 11%.[15-17]

Epulis fissuratum which is formed due to prosthesis and trauma is most frequently seen after the 5th decade.[4,18] In this study, we determined it most frequently in 10-30 age range. This shows that the formation of epulis fissuratum is not only due to the use of prosthetic teeth, but it may also occur after any trauma to the oral mucosa.

Since our study was planned retrospectively, patients' informations could not be questioned in detail. Factors that could play a role in etiopathology such as smoking, alcohol use, and chronic irritation could not be questioned. This is the limitation of our study.

Table 2. Histopathological diagnosis according to age groups

Pathological diagnosis	10-20 years	21-30 years	31-40 years	41-50 years	51-60 years	61-70 years	71-80 years
Dentigerous cyst	-	1	-	-	1	1	-
Epithelial dysplasia	-	-	-	-	-	1	-
Epithelial hyperplasia	1	-	-	1	-	-	1
Epithelial inclusion cyst	-	1	-	-	1	-	-
Epulis fissuratum	1	2	-	-	-	-	-
Fibroepithelial papilloma	-	-	-	-	3	1	-
Fibroepithelial polyp	-	-	-	-	2	-	-
Granulation tissue	1	-	1	-	-	-	1
Pyogenic granuloma	1	1	-	1	1	1	2
Irritation fibroma	-	-	-	1	2	-	1
Cavernous hemangioma	-	-	1	1	-	1	-
Chronic actinic chelitis	-	-	-	-	-	-	1
Chronic inflammation	-	-	3	2	2	-	-
Lymphangioma circum-scriptum	-	-	-	-	-	1	-
Lichen planus	-	1	-	-	2	1	-
Leukoplakia	-	-	-	1	-	-	-
Monomorphic adenoma (Basal cell adenoma)	1	-	-	-	-	-	-
Mucocele	1	-	1	-	1	-	-
Odontogenic keratocyst	-	-	-	1	-	-	-
Radicular cyst	4	1	-	-	1	2	-
Squamous papilloma	2	1	-	1	-	1	-

Conclusion

As a result, biopsies should be performed to exclude malignancy in the oral cavity. In addition, the diagnosis of rare lesions is important in terms of treatment management.

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