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**Abstract:** Oral cavity lesions are among the most common application reasons to otolaryngology, family medicine, dentistry and dermatology polyclinics. We aimed to retrospectively examine the patients who applied to our otorhinolaryngology clinic with the complaint of intraoral lesions and biopsied for diagnosis, in terms of gender, age, location of the lesion, and pathological diagnoses. 147 patients between the ages of 12-83 who applied to our otorhinolaryngology clinic between 2015-2020 with complaints of intraoral lesions and biopsy were included in our study. Patient archive files were examined retrospectively; and the gender, age, location of the lesion and pathological diagnoses of the patients were recorded. The diagnoses of the biopsy materials were classified as benign, premalignant and malignant. The mean age of the patients was 51.4 ( $\pm$  15.3), 72 (49%) were male and 75 (51%) were female. The lesions were 81.6% benign, 10.9% malignant and 7.5% premalignant. The most benign lesion detected was squamous papilloma (n: 22), and the most malignant lesion was squamous cell carcinoma (n: 16). Although oral cavity lesions are usually benign in nature, there are also premalignant and malignant lesions. Clinicopathological evaluation is very important in patients presenting with the complaint of lesions in this region due to the risk of malignancy.

## INTRODUCTION

Oral cavity lesions are among the most common application reasons to otolaryngology, family medicine, dentistry and dermatology polyclinics.<sup>1</sup> Oral cavity is the entrance part of the respiratory and digestive system. The tongue, gingiva, retromolar region, hard palate, buccal and palatal mucosa, floor of the mouth and lips are the structures that make up the oral cavity.<sup>2</sup> The mucosa of this region is covered with squamous epithelium over vascularized connective tissue. While the epithelium in the hard palate, gingiva and lips is keratinized, other regions do not contain a keratin layer.<sup>1</sup> The lesions in oral cavity may be benign lesion caused by infection or autoimmune, premalignant and malignant causes. Lesions secondary to systemic diseases such as Behçet's disease and SLE can be detected in oral cavity.<sup>1,3</sup>

The most common complaint of these patients presenting to the polyclinic is pain, but the lesions can also be painless swelling. There is a stinging pain in ulcerative lesions, it may be more in the form of dull pain in inflammatory lesions. Systemic complaints such as fever, weakness, malaise are not encountered except for infectious and autoimmune causes. Sometimes it can be seen as a regional change that is noticed incidentally without any symptoms.<sup>4,5</sup> Ulcerative and painful lesions may be a sign of a neoplastic pathology. Some premalignant lesions can be confused with benign lesions both macroscopically and microscopically. The most important point here is to diagnose the patient correctly and plan his treatment. The gold standard in diagnosis is histopathological examination after adequate incisional or excisional tissue biopsy.<sup>6</sup>

In the literature, chronic inflammation, mucocele, pyogenic granuloma, irritation fibroma, giant cell fibroma, spindle cell lipoma, chronic sialadenitis and oral lichen planus are the most common benign lesions of the oral cavity. Premalign lesions are diagnosed as dysplasia or carcinoma in situ. Squamous cell carcinoma and basal cell carcinoma are the most common malignant lesions.<sup>6,7</sup>

In our study, we examined retrospectively the files of patients who applied to our Otorhinolaryngology clinic with complaints of intraoral lesions and received biopsy for diagnosis between 2015-2020; The gender, age, location of the lesion and pathological diagnoses were evaluated.

## MATERIALS and METHODS

In our study, we examined the 147 patients between the ages of 12-83 who applied to our Otorhi-

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nolaryngology clinic between the years of 2015-2020 with complaints of intraoral lesions and had biopsy were included. Patient archive files were examined retrospectively; and the gender, age, location of the lesion and pathological diagnoses of the patients were recorded. Patients were divided into age groups of  $\leq 18$ , 18-30, 31-45,  $\geq 46-64$  and  $\geq 65$ . The diagnoses of the biopsy materials were classified as benign, premalignant and malignant. The results of the samples coming for consultation from the external hospitals were excluded from evaluation. The findings obtained were statistically analyzed using the SPSS 22 program for the numerical variables as minimum, maximum, mean and standard deviation; Number and percentage values were determined for categorical variables. Chi-square test was applied to categorical variables and  $p \leq 0.05$  was considered statistically significant. The approval of Alanya Aladdin Keykubat University Ethics Committee was obtained for our study (2021 / 08-03).

## RESULTS

In our study, the mean age of the patients was 51.4 ( $\pm 15.3$ ), 72 (49%) were male and 75 (51%) were female. The patients were mostly in the middle-aged group of  $\geq 46-64$  (n: 62). (Table 1) 81.6% of the lesions were benign, 10.9% were malignant, and 7.5% were premalignant. Benign and malignant lesions were more common in middle-old age but were not statistically significant ( $p > 0.05$ ). The most common location of the lesions was the lower lip (28.6%), and the least retromolar trigone (0.7%). The most common benign lesions detected were pyogenic granuloma (n:26) and squamous papilloma (n: 22). (Table 2) The most malignant lesions were squamous cell carcinoma (n: 16).

## DISCUSSION

Oral cavity lesions may present with different diagnoses ranging from benign to malignant. Underlying causes are frequently smoking, chronic irritation, viral infections, thermal trauma, poor oral hygiene, alcohol and systemic diseases.<sup>1,3,8</sup> Pa-

**Table 1.** Distribution of age groups

Age	Group Number	Percentage(%)
$\leq 18$	2	1.4
18-30	12	8.2
$\geq 31-45$	39	26.5
$\geq 46-64$	62	42.2

tients' disregard for symptoms or prolonging the diagnosis period due to unnecessary treatment attempts by the physician may cause delay in early diagnosis. The most important point in the differential diagnosis of benign lesions is that pre-cancerous and malignant lesions are not overlooked. Cure can be achieved as a result of early diagnosis of a malignant lesion. However, it may result in metastasis due to late diagnosis. In this case, the clinic and treatment of the patient will be more difficult. Precancerous lesion defines lesions that have the risk of transforming into malignancy after a certain period of time. In these cells, epithelial dysplasia, which describes cellular atypia and loss of normal maturation, is very important. Oral cavity lesions are generally perceived by patients as situations that are expected to heal, so patients come to the clinic after a certain period of time. Especially in patients with risk factors, early diagnosis can be made by biopsy, and the prognosis in malignancies improves. Since the differential diagnosis of benign and premalign lesions can only be made by biopsy, evaluation by a specialist is important.

The prevalence of oral lesions increases with advancing age.<sup>8,9</sup> In the study of Güneş et al.<sup>8</sup>, it was found that oral lesions mostly spread between the ages of 40-70. In a series of 1468 cases with oral

**Table 2.** Different types of benign, pre-malign and malign lesions of oral cavity

Lesions	Number of cases	Total (%)
Actinic cheilitis	2	1.4
benign fibrous histiocytoma	1	.7
fibroepithelial polyp	6	4.1
dysplasia	1	.7
heck disease(focal epithelial hyperplasia)	1	.7
inflammatory granulation tissue	4	2.8
irritation fibroma	13	8.8
cavernous hemangioma	1	.7
chronic inflammation	18	12.3
lichen planus	7	4.8
lipom	1	.7
leukoplakia	1	.7
mucosel	8	5.4
myofibrom	1	.7
normal tissue	4	2.7
pemfigus vulgaris	1	.7
peripheral ossifying fibroma	1	.7
plasma cell mucositis	1	.7
pleomorphic adenoma	2	1.4
pyogenic granuloma	26	17.7
sjögren	1	.7
squamous epithelial hyperplasia	4	2.7
squamous cell carcinoma	16	10.9
squamous papilloma	22	15.0
verruca vulgaris	3	2.0
<b>Total</b>	147	100.0

cavity lesions, the mean age was found to be 53.18.<sup>10</sup> Azaklı et al.<sup>2</sup> reported that the mean age was 42.6 in benign lesions and 66.1 in malignant lesions in their study with 662 patients. In our study, the average age of the patients was 51.4, which is close to the values in the literature. In general, it is seen in the literature that benign and premalign lesions are observed more in female patients than in males, and malignant lesions are more common in advanced age and male gender.<sup>2,10</sup> Kosam et al.<sup>11</sup> stated that the male/ female sex ratio of oral cavity lesions was higher in males as 3/1 in their study. Öztürk et al.<sup>10</sup> found the male to female ratio close. In our study, the male / female ratio was close to each other (M / F 49% / 51%). When we examined the location of the lesions, we found that the most common biopsy localization areas in our study were the lower lip (28.6%) and the second buccal mucosa (21.8%). In a study they reported that lesions were most frequently detected in the lower lip (32.6%) in their study of 1468 cases.<sup>10</sup> On the other hand, Sengüven et al.<sup>12</sup>, in their study investigating 1732 oral cavity lesions, reported gingiva as the most common location with 38.9%.

In our study, benign lesions were considerably higher than malignant lesions with a rate of 81.6%. Among the benign lesions, we found the most common pyogenic granuloma (21.6%) and squamous papilloma (18.3%). Dutra et al.<sup>13</sup> reported that the most frequently observed lesion was inflammatory fibrous hyperplasia and the second most common lesion was oral pyogenic granuloma. Öztürk et al.<sup>2</sup> and Azaklı et al.<sup>10</sup> reported the most common benign lesion in their study was irritation fibroma. Pyogenic granuloma are slowly growing, asymptomatic and painless, pink or purple lesions. However, they may develop rapidly.<sup>14</sup> The surface of the lesion is ulcerated. Minor trauma may cause bleeding due to hyperplastic granulation tissue rich in capillaries. It can be clinically monitored unless it is small, painless and bleeding. If symptomatic, it is surgically excised. Squamous papilloma are papillary or verrucous exophytic lesions that occur as a result of benign proliferation of the multilayer squamous epithelium caused by human papilloma virus

(HPV).<sup>15,16</sup> These lesions show local spread and have a high recurrence rate. Although the presence of HPV is accepted in the etiopathogenesis, the viral etiology is still under discussion.<sup>17</sup>

Epithelial dysplasia in histopathological examination of premalignant lesions is evaluated in three subcategories as mild, moderate, and severe.<sup>9,10</sup> Dysplasia can be histologically confused with reactive/ regenerative epithelium, keratosis secondary to trauma, and infections. Conversion to malignancy is observed at a rate of 2-5% in premalignant lesions. However, close follow-up of these patients is required due to possible risks. Dysplasia and malignant tumor diagnoses are possible, especially in lesions monitored as erythroplakia and leukoplakia by the clinic. In our study, there were 7.5% premalignant lesions and 90.9% of the patients were female. The frequency of lesions in female gender was consistent with other studies in the literature.<sup>2,18</sup> In a study conducted in our country, it was reported that the premalignant lesion rate was 11.9%, most frequently located in the lower lip.<sup>10</sup> Guedes et al.<sup>19</sup> detected 4.3% premalignant lesions in their study and reported that it was the most common tongue localization. In our study, premalignant lesions were most commonly located in the buccal mucosa. We found lichen planus as the most common diagnosis among premalignant lesions. Lichen planus is a chronic inflammatory mucocutaneous disease and its etiology is not clear, but chronic irritation, genetic factors and hepatitis C are thought to play a role. Oral lichen planus lesions often show a painful red center with erosions and ulcerations. They are white lesions that spread in the form of papular or reticular patches, usually painless. It is frequently seen on the buccal mucosa, to a lesser extent on the lips, tongue and palate.<sup>20</sup> Sengüven et al.<sup>12</sup> reported the most common buccal / vestibular mucosa localization rate of 11.9% in their study. In our study, we detected 4.8% of Lichen planus and the most common location was buccal mucosa.

The rate of malignant lesions among all lesions was 10.9%. All of our malign diagnoses were squamous cell carcinoma. Squamous epithelium is the primary surface structure of the oral cavity mucous membrane. Squamous cell carcinoma accounts for more than 90% of oral cavity cancers.<sup>2</sup> A small proportion of malignant tumors consist of malignant melanoma, salivary gland tumors, sarcomas, and malignant odontogenic tumors. Dysplasia that starts in epithelial cells develops when it passes through the basement membrane and invades the subepithelial area. Risk factors in the etiology include smoking, alcohol, sunlight, HPV, poor oral hygiene and chronic inflammation.<sup>7,9</sup> In our study, the most common malignant lesion was squamous cell carcinoma. In studies, the most common localization regions of squamous cell carcinoma have been reported as the lower lip and tongue and it is more common in males after the 4th decade.<sup>2,7</sup> We found in our study that the most frequently observed site was the lower lip with 56% (n:9). Azaklı et al.<sup>2</sup> reported that 51 patients diagnosed with squamous cell carcinoma were detected after the 5th decade in their studies with 662 cases.

In our study, patients with malignant tumors were most frequently diagnosed after the 5th decade and almost all of the patients were male.

### Conclusion

Although oral cavity lesions are usually benign in nature, there are also premalignant and malignant lesions. Clinicopathological evaluation is very important in patients presenting with the complaint of lesions in this region due to the risk of malignancy. After a complete clinical history, the agreement between pre-diagnosis and pathology biopsy diagnoses increases considerably. Early diagnosis of malignant patients decreases morbidity and mortality rates.

### Conflict of interest

No conflict of interest was declared by the authors.

### Financial disclosure

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