Oral Tumors; Clinicopathological Study among Patients Attending ENT Clinic in Baghdad

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Abstract

Background: Oral tumors are one of the most challenging tumors regarding their good prognosis in early diagnosis and very difficult control in advancing stages.

Objectives: To study the prevalence, types and clinical presentation of oral tumors in comparison to other oral lesions among patients attending ENT clinic.

Methods: This study included 534 patients with different oral complains attending ENT clinics in AI-Yarmouk Teaching Hospital, and AI-Kindy Teaching Hospital - Baghdad, in the period from 1st jan1999 till 31th des 2006 (8 years interval).

Results: The results of this study showed that the prevalence of malignant lesions was 13.5% (72 out of 534); the males constitute 59.7 % of them. Premalignant lesions constitute only 3.9% (21 out of 534) of patients; the males constitute 66.7 % of them. Benign lesions in 8.6% (46 out of 534); the males constitute 69.6 % of them. Other lesions constitute 74% (395 out of 534); the males constitute 65.8 % of them. Squamous cell carcinoma is the most common malignant tumor (found in 71% of malignant lesions).

Conclusions: Most patients are males and the most common manifestation is sore throat. The most common sign of presentation is swelling and the most common histological type of malignant tumors is squamous cell carcinoma (71%). These patients usually attend ENT clinic seeking for simple therapy, we see that it's the job of the otolaryngologist to diagnose those patients early which has a major influence on prognosis.

Key words: Oral, tumors, ENT clinic.

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Introduction

Cancer is a major cause of disease and death throughout the world. Oro-pharyngeal cancer (cancer found in the oral cavity and the oropharynx) is one of the six most frequently occurring cancers in the world [(1)].

The oral cavity includes: the lips, teeth, and gums, the lining inside the lips and cheeks (buccal mucosa), the floor of the mouth (under the tongue), the top of the mouth (hard palate), the small area behind the wisdom teeth (retromolar trigon). The oropharynx includes: the back one-third of the tongue, the soft palate, the tonsils, and the back of the throat [(2)].

Oral cancer is often preceded by specific lesions and conditions that are called precancerous. Different lesions have been reported to have potential to transform into cancer. Among these, the most frequently mentioned are leukoplakia, erythroplakia, Erythroleukoplakia, oral submucous fibrosis and lichen planus. Oral tumors are one of the most challenging tumors regarding their good prognosis in early diagnosis&very difficult control in advanced stages [(3)].

Large number of inflammatory keratotic, premalignant, and malignant conditions may be detected on macroscopical inspection and palpation. This is particularly important for the Otolaryngologist, Dentist, and Maxillofacial surgeons, who always examine the oral cavity of every patient [(2)].

One of the major problems in clinical practice is the early detection of oral cancer which can be seen but may be misdiagnosed because these tumors may resemble other benign conditions at its early stages for this reason otolaryngologist should be familiar with the signs of early oral cancer. The early diagnosis and treatment of oral lesions are based on the concept that malignant lesions in particular develop over along period of time. So that treatment at early or pre invasive stage offers the best prognosis and even the chance of a cure [(1, 3)].

This study can give otolaryngologist as well as general practitioners an idea about the prevalence, types and clinical presentation of these tumors in comparison to other oral lesions in patients attending ENT clinic.

Methods

A convenience sample of five hundred and thirty four male and female was included in this cross sectional study. All patients presented with oral lesions and attending ENT clinics in AI-Yarmouk Teaching Hospital, and AI-Kindy Teaching Hospital, in Baghdad for the period from 1st jan 1999 till 31th des 2006 (8 years interval).

A case sheet is filled for each patient including a detailed history, and a biopsy is taken to all patients for histo-pathological diagnosis and typing. Majority of biopsies are taken under local anesthesia in the outpatient clinic. The local anesthetic used is topical xylocain spray 10% followed by 2% xylocain solution with adrenaline 1:80000 by infiltration around the lesion and a blade number 15 is used to cut the tissue, this is done on the coach in a semi sitting position with running suction. Large lesions and those

with a high suspicion of malignancy are biopsied under general anesthesia with cuffed endotracheal tube in tonsillectomy position and a mouth gag in place.

The biopsy specimens are processed in the Oral Pathology Department, College of Dentistry, University of Baghdad and diagnosed by oral pathologist. The histo-pathological diagnosis classified as:

1. Malignant tumors: Squamous cell carcinoma, Lymphoma, Adeno-carcinoma, Muco-epidermoid carcinoma, and Sarcoma.

2. Premalignant lesions:

- Leukoplakia - a condition characterized by a whitish patch that develops inside the mouth or throat.
- Erythroplakia - a condition characterized by a red, raised patch that develops inside the mouth.
- Erythroleukoplakia.
- Submucosal fibrosis.
- Lichen planus.

3. Benign tumors: sequamous papilloma, pleomorphic adenoma, connective tissue tumors (haemangioma), and odontogenic tumors.

4. Other lesions: Inflammatory, traumatic, congenital lesions, and systemic disease with oral manifestations.

Results

The results of this study showed that the prevalence of malignant lesions was 13.5% (72 out of 534); the males constitute 59.7 % of them (43 out of 72). Premalignant lesions constitute only 3.9% (21 out of 534) of patients; the males constitute 66.7 % of them (14 out of 21).

Benign lesions in 8.6% (46 out of 534); the males constitute 69.6 % of them (32 out of 46). Other lesions constitute 74% (395 out of 534); the males constitute 65.8 % of them. **(Table- 1)**

All patients are assigned 10 years interval age groups. The percentage distribution of benign, premalignant, and malignant lesions is computed for each group. The results reveled that 63.9% (46 out of 72) of malignant lesions occurred in 50 years and above, 25% occurred between 10 and 49 years. While only 11.1% occurred below 10 years. 32.3% (21 out of 65) of patients 70 years or more had malignant lesions, while this proportion decrease to 24.6% (46 out of 187) in patients 50 years and more. The most common age group affected by malignant lesions is (50-59 yrs). **(Table-2)**

(Table- 1)

The distribution of the study sample regarding their gender and histological diagnosis

Gender	Histological Diagnosis								Total	
	Malignant		Premalignant		Benign		Other			
	No	%	No	%	No	%	No	%	No	%
Male	43	8.1	14	2.6	32	6	260	48.7	349	65.4
Female	29	5.4	7	1.3	14	2.6	135	25.3	185	34.6
Total	72	13.5	21	3.9	46	8.6	395	74	534	100

(Table-2)
The Distribution of the Study Sample Regarding Their Age and Histological Diagnosis

Age groups	Histological Diagnosis								Total	
	Malignant		Premalignant		Benign		Other			
	No	%	No	%	No	%	No	%	No	%
10>	8	1.5	0	0	7	1.3	51	9.6	66	12.4
10-19	3	0.6	0	0	14	2.6	62	11.6	79	14.8
20-29	4	0.7	0	0	3	0.6	51	9.6	58	10.9
30-39	5	0.9	3	0.6	12	2.2	47	8.8	67	12.5
40-49	6	1.1	2	0.4	7	1.3	58	10.9	77	14.4
50-59	13	2.4	7	1.3	3	0.6	43	8	61	11.4
60-69	12	2.2	4	0.7	0	0	45	8.4	61	11.4
≥70	21	3.9	5	0.9	0	0	38	7.1	65	12.1
Total	72	13.5	21	3.9	46	8.6	395	74	534	100

The tongue is the commonest site in the oral cavity involved by the lesions (27.3%, 146 out of 534). 24% (35 out of 146) of them are malignant. Also 48.6% of malignant tumors appear on the tongue (35 out of 72), while lips and buccal mucosa showed the lowest involvement (only in 5.6%, 4 out of 72) **(Table- 3**).

(Table -3)
The Distribution of the Study Sample Regarding Their Histological Diagnosis and the Site of the Lesion

Site of the lesion	Histological Diagnosis								Total	
	Malignant		Premalignant		Benign		Other			
	No	%	No	%	No	%	No	%	No	%
Tongue	35	6.6	6	1.1	11	2	94	17.6	146	27.3
Palate	6	1.1	3	0.6	15	2.8	63	11.8	87	16.3
Floor	12	2.2	2	0.4	6	1.1	61	11.4	81	15.2
Buccal mucosa	4	0.7	5	0.9	9	1.7	57	10.7	75	14.0
Upper and lower alveoli	5	0.9	2	0.4	3	0.6	50	9.4	60	11.2
Lip	4	0.7	2	0.4	2	0.4	49	9.2	57	10.7
multiple	6	1.1	1	0.2	0	0	21	3.9	28	5.2
Total	72	13.5	21	3.9	46	8.6	395	74	534	100

The commonest clinical type of malignant lesion was swelling (in 43.1 0f all malignant lesions, 31 out of 72). While malignant lesions as swelling, ulcer or both were presented in 83.4% (60 out of 72) of all malignant lesions. Still ulcer, swelling or both presented in 61.9%, 80.4%, 59.7% and 64.8% of premalignant, benign, other, and total lesions respectively. As shown in **(Table- 4).**

(Table- 4)
The Distribution of the Study Sample Regarding Their Histological Diagnosis and the Clinical Type of the Lesion

Clinical type	Histological Diagnosis								Total	
	Malignant		Premalignant		Benign		Other			
	No	%	No	%	No	%	No	%	No	%
Ulcer	20	3.7	9	1.7	7	1.3	107	20	143	26.8
Swelling	31	5.8	2	0.4	28	5.2	63	11.7	124	23.2
Ulcerated Swelling	9	1.7	2	0.4	2	0.4	66	12.4	79	14.8
Red…	5	0.9	1	0.2	2	0.4	56	10.5	64	12.0
White…	3	0.6	6	1.1	5	0.9	44	8.2	58	10.9
Red & white	2	0.4	0	0	0	0	41	7.7	43	8.1
others	2	0.4	1	0.2	2	0.4	18	3.4	23	4.3
Total	72	13.5	21	3.9	46	8.6	395	74	534	100

All lesions are assigned according to the main clinical manifestations; the commonest symptom recorded is throat discomfort or sore throat which is found in 166 (31.1%) patients, 26 (15.7%) of them among malignant lesions, while enlarge lymph node and nasal obstruction only presented in 6.9% (5 out of 72) of patients **(Table- 5).**

had malignant lesions.Throat discomfort or sore throat also represented 36.1% (26 out of 72) of presentation

(Table-5)
The Distribution of the Study Sample Regarding Their Histological Diagnosis and the Clinical Presentation of the Lesion.

Main Clinical presentation	Histological Diagnosis								Total	
	Malignant		Premalignant		Benign		Other			
	No	%	No	%	No	%	No	%	No	%
Soreness (discomfort) in the throat	26	4.9	7	1.3	15	2.8	118	22	166	31.1
Dysphagia	16	3	4	0.7	7	1.3	61	11.4	88	16.5
Nasal obstruction	5	0.9	2	0.4	5	0.9	74	13.9	86	16.1
Referred ear ache	6	1.1	3	0.6	9	1.7	67	12.5	85	15.9
Bleeding	14	2.6	2	0.4	7	1.3	37	6.9	60	11.2
Lymph nodes	5	0.9	3	0.6	3	0.6	38	7.1	49	9.2
Total	72	13.5	21	3.9	46	8.6	395	74	534	100

The most common malignant tumor was squamous cell carcinoma (51 out of 72 cases), other malignant types include: 11 cases Lymphoma, 7 cases Adeno-carcinoma, two cases Muco-epidermoid carcinoma,

while sarcoma was the least common and only found in one case **(Figure- 1).**

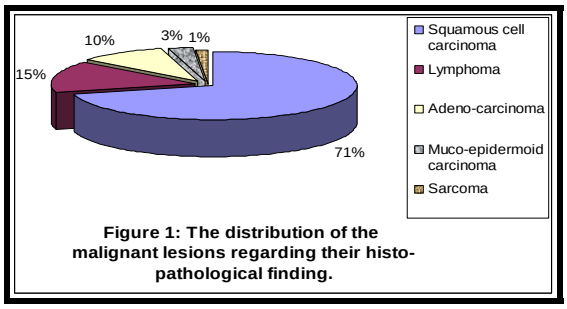

Figure 1: The distribution of the malignant lesions regarding their histo-pathological finding.

The most common premalignant lesion is leukoplakia (12 out of 21 cases), while erythroplakia, erythroleukoplakia, submucosal fibrosis, and lichen planus were found in four, three, one and one cases respectively **(Figure- 2).**

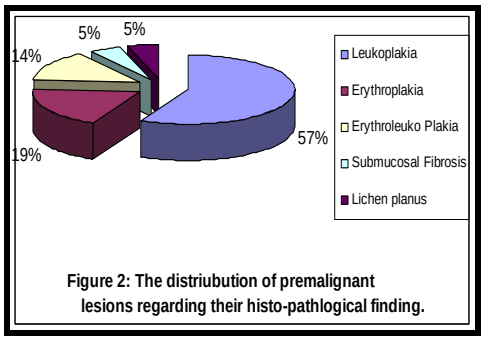

Figure 2: The distriubution of premalignant lesions regarding their histo-pathlogical finding.

The most common benign tumor is squamous papilloma (27 out of 46 cases). While pliomorphic adenoma, hemangioma, and odontogenic tumors were found in twelve, five, and two cases respectively **(Figure-3).**

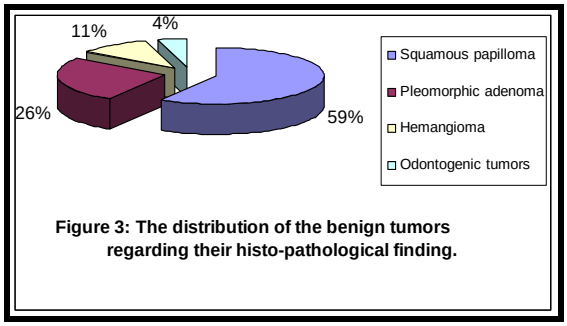

Figure 3: The distribution of the benign tumors regarding their histo-pathological finding.

Regarding other lesions, 317 out of 395 lesions were inflammatory in nature, while traumatic, presentation of systemic disease, and congenital lesions were found in 49, 23, and 6 cases respectively **(Figure- 4).**

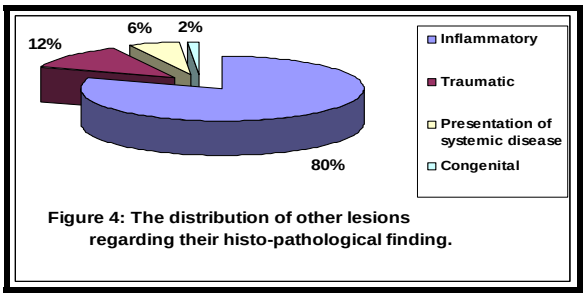

Figure 4: The distribution of other lesions regarding their histo-pathological finding.

Discussion

Diagnosing and treating lesions of the mouth and gums is challenging for most clinicians because of the wide variety of disease processes that can present with similar appearing lesions and the fact that most clinicians receive inadequate training in mouth diseases[4]. There should be a close cooperation between otolarygologist and oral facio-maxillary surgeons for better prognosis.

Early detection of oral cancer and premalignant lesions becomes increasingly an attractive subject both for physicians and researchers in different medical and dental departments, as these lesions can be detected on routine examination of the oral cavity done by all these specialties. However, otolaryngologists are the second most common site for referral of these lesions from the health care practitioner [5] and can detect 12.1% of symptomatic patients with oral cancer[6].

Because of the relatively low prevalence of the disease and a lack of adequate knowledge of the natural history, its generally agreed that mass population screening for oral cancer and precancer may not be cost effective and cannot be recommended [7,8], opportunistic screening undertaken when the patients attend a health care professional for some other purpose, may be beneficial [9]. However, in this study we consider patients attending ENT clinic and examined by a specialist directly without taken the referral pattern in consideration which is interestingly low in this study (only 5% of the sample patients are referred) this can give an idea about the prevalence of these lesions in the ENT department and the role of the otolaryngologist in detection of these lesions which is the main aim of this study.

In this study the prevalence of malignant lesions is (13.5%) and for premalignant lesions is (3.9%), overall

prevalence for both lesions is (17.4%), most studies recorded a prevalence ranging from (0.2%- 20.4%) [9-to 35] this difference might be attributed to the setting of these studies, most studies depending on population screening reported a low prevalence while those depending on high risk patients reported a high prevalence. The present study lies in the high prevalence group which can reflect the positive influence of the specialist screening and the detection rate by a general practitioner.

The mean patient's age is 45.2 years for the total sample, 48 years for malignant lesions and 66 years for premalignant lesions, the most common age group affected by malignant tumors is 70-80 years, and for the premalignant lesions is 50-59 years. The peak occurrence, however; varies in different population groups. In Western countries the peak occurrence is in the 60-70 years, where as in Asia its generally earlier [36] in Iran and India the peak occurrence appears to be in the 50-60 years [37] for oral cancer, these results mostly related to the race and habits of these population groups.

In our study males are more affected than females for both the premalignant and malignant lesions which goes with the results of the sex distribution of the patients in some of the large series and also from the higher incidence rates among men [37-38] .This difference can be attributed to smoking habits in both sexes as proved by some studies [38-39].

In this study the tongue is the most commonly affected site (27.3%) in the total sample and 48.6% (35 out of 72) as reported by Menck et al [40] and Mashberg et al [41], but some studies reported a different site like the palate [42], the buccal mucosa [43, 44], the floor of mouth [45], and the mandibular gingivae [46] which are related to the chewing habits in the population sample screened.

Swelling is the most common clinical type in the present study for malignant lesions as reported by Rasheed (1999)[47], and white lesion is the most common for the premalignant lesions. Studies show that ulceration is the most common presentation in malignant lesions [41, 48] and red lesion is the most common premalignant lesion reported [41,45] , this is mostly due to the late presentation of the patients and the pathological type of the tumors in our study.

The clinical presentation of the patients:

The most common clinical presentation in our study is sore throat or pain resembling that reported by Mashberg et al [41], Silverman [49] , Maran (1998) [50] ,Hamdi and AL-Talabani(1992) [51],John Hibbert(1997) [52], and Cumming (1998) [53] .

The most common malignant tumor in our study is squamous cell carcinoma as reported by all literatures; Rossi and Hirsch (1997) [54], Weir and Skinner (1998) [55], Hamdi and AL-Talabani (1992) [51], and Otah EC *et al* [42].

Conclusion

Oral tumors and premalignant lesions are common problem in ENT clinic. The otolaryngologists should be familiar with those lesions (type, presentation, and site), and their sequelae. Therefore teaching programs for soft tissue examination of the oral cavity for cancer detection is a wise decision for all medical and dental practitioners.

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Al- Kindy Col Med J 2009; Vol .5 (1): P:18

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