

## Oral malignant lesions in a sample of patients in the north of Iraq (Retrospective study)

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### ABSTRACT

**Aim:** To determine the frequency of occurrence and the distribution of different oral malignant lesions in a sample of patients in the north of Iraq. **Materials and Methods:** This study including the review of 6603 patients' files with different types of malignant tumors of the body between the years 1995–1999 and the cases affecting the oral cavity were isolated and undergo descriptive statistical analysis. **Results:** From the 6603 patients' files reviewed, only 119 cases (2%) had malignant lesions of the oral cavity with age range between 2.5–90 years and the mean of age was 58.3 years. Male:female ratio was 1.2:1. Squamous cell carcinoma was the predominant tumor of the oral cavity. Lower lip was the most commonly affected site by the oral cancer. **Conclusion:** Oral cancer included many types of tumors but the predominant type is the squamous cell carcinoma that takes many forms. Although it show high occurrence over the age of 40 years but it may occur at any age and sex. The other types of cancer although they are rare in the oral cavity but they should be taken in consideration during diagnosis of oral cancer.

**Key Words:** Oral malignancies, oral lesions.

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### INTRODUCTION

The incidence of oral cancer show considerable geographical variations throughout the world due to many reasons like differences in ethnic, habits and the presence and the severity of the etiological factors.<sup>(1)</sup> In USA, cancer of the oral cavity and pharynx accounted 3% of all cancers;<sup>(2, 3)</sup> while in India, cancer of the mouth and tongue may comprise up to 50% of all cancers where they are associated with chewing betel quid and tobacco.<sup>(4, 5)</sup>

Oral cancer is one of the ten most common cancer over the world.<sup>(6,7)</sup> For developing countries, it rank fourth in frequency while for developed countries it rank eighth in frequency.<sup>(8)</sup>

Oral cancer has long been considered to be tumor of elderly and it has been seen most frequently in people older than 40 years<sup>(9)</sup> and world wide oral cancer show high incidence in males more than females.<sup>(3)</sup>

The etiology of oral cancer is multifactorial. Genetic, environmental, social and behavioral effects may all be implicated. However, alcohol and tobacco are two of the most important risk factors for develop-

ment of oral cancer.<sup>(9)</sup>

This study was carried out to determine the frequency of occurrence and the distribution of different oral malignant lesions among sample of patients in the north of Iraq and to compare it with other studies.

### MATERIALS AND METHODS

This retrospective study including the review of 6603 files of patients suffering from different types of malignant lesions whose visited Hazim Al-Hafidh Hospital for oncology and nuclear medicine in Mosul City between the years 1995–1999 seeking treatment for their diseases.

The collected data were analyzed to discover the followings:

1. The frequency of occurrence of the oral malignant lesions.
2. The site of distribution of the malignant lesions in the oral cavity based on the international classification of diseases (ICD).
3. Age of the patients.
4. Sex of the patients.
5. The histopathological types of the malignant lesions of the oral cavity.

The statistical analysis used in this study was descriptive statistic.

**RESULTS**

From the 6603 cases reviewed, only 119 cases (2%) had malignant tumors of the oral cavity. The age range was between 2.5–90 years with mean of age was 58.3 year and the male:female ratio was 1.2:1. The distribution of the malignant tumors according to the oral sites was shown in Table (1) and it could be observed that sq-

uamous cell carcinoma forming the majority of the cases of oral cancer (80%) and lower lip is the site of predilection of oral cancer (36.1%). The two cases of Burkitt's lymphoma recorded were occurred in the maxilla of two male patients. The four cases of osteogenic sarcoma, three of them affected the maxilla and one affected the mandible, and the two encountered cases of malignant ameloblastoma were affected the mandible.

Table (1): The distribution of the malignant tumors according to the oral sites

Tumor	Site												Total	
	Lip		Tongue		Palate		Gingiva		Floor of the Mouth		Buccal Mucosa			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Squamous Cell Carcinoma</b>	49	51.5	28	29.4	2	2.1	1	1	7	7.3	8	8.4	95	80
<b>Osteogenic Sarcoma</b>							4						4	3.3
<b>Adenoid Cystic Carcinoma.</b>					3				1	1			4	3.3
<b>Adenocarcinoma</b>					3								3	2.5
<b>Non-Hodgkin's Lymphoma</b>					3								3	2.5
<b>Malignant Ameloblastoma</b>							2						2	1.6
<b>Burkitt's Lymphoma</b>							2						2	1.6
<b>Mucoepidermoid Carcinoma</b>					1								1	0.8
<b>Verrocous Carcinoma</b>									1				1	0.8
<b>Rhabdomyosarcoma</b>							1						1	0.8
<b>Lieomyosarcoma</b>					1								1	0.8
<b>Eosinophilic Granuloma</b>							1						1	0.8
<b>Malignant Fibrous Histiocytoma</b>					1								1	0.8
<b>Total</b>	49	41.1	28	23.5	14	11.7	11	9.2	9	7.5	8	6.7	119	100

Table (2) showed the relation between the oral malignant tumors and the age groups of the patients, while Table (3) revealed the relation between the oral malignant tumors and the sex of the patients and, as shown, the four cases of adenoid cystic carcinoma were encountered in females and the four recorded cases of osteogenic sarcoma, two of the three maxillary lesions

were affected young females (18, 22 years) while the other two cases were affected older males (35, 88 years). The relation between patients' age and sex was mentioned in Table (4) and it exhibited that the peak of age of incidence of oral cancer for males was between 61–80 years while for females it was between 51–60 years.

Table (2): The relation between the oral malignant tumors and the age groups of the patients

Age Group	Tumors													
	Squamous Cell Carcinoma	Non-Hodgkin's Lymphoma	Burkitt's Lymphoma	Adenoid Cystic Carcinoma	Osteogenic Sarcoma	Adenocarcinoma	Malignant Ameloblastoma	Histiocytoma	Malignant Fibrous	Lieomyosarcoma	Rhabdomyosarcoma	Verrocous Carcinoma	Mucoepidermoid Carcinoma	Eosinophilic Granuloma
1–10			1						1					1
11–20			1		1									
21–30		1			1					1				
31–40	7	1		2	1		1							
41–50	16					1								
51–60	26			1		2	1	1						
61–70	24			1							1			
71–80	18	1										1		
81–90	4				1									
<b>Total</b>	<b>95</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Table (3): The relation between the oral malignant tumors and the sex of the patients

Tumor	Sex	
	Male	Female
Squamous Cell Carcinoma	52	43
Osteogenic Sarcoma	2	2
Adenoid Cystic Carcinoma		4
Adenocarcinoma	1	2
Non-Hodgkin's Lymphoma	2	1
Malignant Ameloblastoma	1	1
Burkitt's Lymphoma	2	
Mucoepidermoid Carcinoma	1	
Verrocous Carcinoma	1	
Rhabdomyosarcoma	1	
Lieomyosarcoma		1
Eosinophilic Granuloma	1	
Malignant Fibrous Histiocytoma		1
<b>Total</b>	<b>64</b>	<b>55</b>

Table (4): The relation between the age groups and the sex of the patients

Age Groups	Sex	
	Male	Female
1-10	2	1
11-20	1	1
21-30	1	2
31-40	6	6
41-50	8	9
51-60	10	21
61-70	18	8
71-80	14	6
81-90	4	1
<b>Total</b>	<b>64</b>	<b>55</b>

### DISCUSSION

The incidence of oral cancer varies widely around the world and data in some cases are difficult to interpret since cancer registration using international agreed criteria (based on the ICD) is comparatively recent. In Iraq, although oral cancer is a major problem, there is no complete registry of all cases of oral cancer. The frequency of occurrence of oral cancer recorded in this study is 2% of all cancer of the body that approaching those recorded in USA (3%)<sup>(2, 10)</sup> and in UK (2%),<sup>(11)</sup> but in contrast to that, the occurrence of oral cancer among Iraqi patients show greater variation from that recorded in India that reaching up to 50% of all cancers in the body<sup>(4)</sup> and it is considered one of the ten most common cancers in the South East Asia,<sup>(12)</sup> which could be due to variation in the etiological factors.

Squamous cell carcinoma was the most frequently occurring malignant tumors of the oral cavity in this study (80%), which was in agreement with other recorded results in Iraq<sup>(13, 14)</sup> and in Nigeria<sup>(15)</sup> and it was in disagreement with other recorded results as in USA (90%)<sup>(10)</sup> and in Scotland that reach up to 95%.<sup>(16)</sup>

Epidemiological studies have shown that the site of occurrence for oral cancer differs widely. In USA, Canada, Kuwait, Australia and Iraq, the lower lip is the most frequent site of oral cancer,<sup>(3, 17, 18)</sup> which were in consistent with this study, while in other countries like Brazil,<sup>(3, 9)</sup> Scotland,<sup>(3, 16)</sup> Saudi Arabia<sup>(19)</sup> and France<sup>(3)</sup> the tongue is the most frequent site of oral ca-

ncer. In South East Asia (India), buccal mucosa is the most frequent site of oral cancer.<sup>(12)</sup> These differences in the frequency of site of occurrence of oral cancer could be ascribed to the variations in the exposure to the etiological factors like smoking, alcohol drinking, actinic radiation, irritation and other factors.

The incidence of oral cancer is known to be increased with the age. In England, 85% occur in patients over the age of 50 years.<sup>(5, 11, 20)</sup> In this study, 83% occur in patients over the age of 40 years. In Saudi Arabia, the age range of oral cancer patients was 30-80 years.<sup>(19)</sup> In this study, the age range was between 2.5-90 years. The age related incidence suggests that the initiation and promotion of genetic events that result in malignant change are time-dependent and require variable periods of time to exhibit their effects that may reach up to many decades. In this context, the male:female ratio in this study was 1.2:1 for oral cancer and for oral squamous cell carcinoma. These finding agreed with some available records.<sup>(15, 16)</sup>

The most common oral malignant lesions after the squamous cell carcinoma were adenoid cystic carcinoma (3.3%), adenocarcinoma (2.5%). these differences were in consistent with other studies.<sup>(5, 15, 16, 21, 22)</sup>

### CONCLUSION

Oral cancer is an important disease and remain challenge to the clinician especially to the dentist and since the early diagnosis of oral cancer is very important in the treatment and prognosis of oral cancer and as the oral cavity can be effectively screened, dentist should continue to be encouraged to perform oral cancer examination for all patients in addition to the public education that stresses the importance of the hazard of tobacco and alcohol.

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