

## Squamous cell carcinoma of the oral cavity: A clinico-pathological analysis of (1425) cases from Iraq

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### ABSTRACT

A total of (1425) cases of histologically diagnosed squamous cell carcinoma collected from the main centers of pathology in Iraq were analyzed according to age, sex, site, patient complain at time of presentation and histological grading. Patients at their fifth decade of life were the most commonly affected with males to females ratio of (2:1). Lower lip was the most commonly affected site followed by the tongue. The most common clinical complain was ulceration and swelling. More than (70%) of the cases were well-differentiated squamous cell carcinoma. The authors emphasize on the need for interprofessional health care delivery approaches for reducing oral cancer mortality and improving patient's quality of life.

*Key Words:* Oral cancer, oral squamous cell carcinoma.

### الخلاصة

تم تجميع (1425) حالة من سرطانات النسيج الحرفي في التجويف الفموي والمُشَخَّصة نسيجياً من المراكز الرئيسية للتشخيص النسيجي في العراق. أُجري تحليل هذه الحالات نسبة إلى العمر، الجنس، وشكوى المريض عند عرض حالته سريرياً وكذلك التصنيف النسيجي. لقد تبين بأن المرضى في العقد الخامس من العمر كانوا أكثر عرضةً من بقية الأعمار، ونسبة إصابة الذكور للإناث كانت (2:1). كانت إصابة الشفة السفلى أكثر عموماً، وبعدها اللسان وكذلك التقرحات والأورام كانت أكثر عموماً كشكوى سريرية للمرضى المصابين. أكثر من (70%) من الحالات كانت من السرطانات الحرفية الجيدة التمييز. ركز البحث حول حاجة تداخل الاختصاصات المعنية لتقديم العناية الصحية وذلك لتقليل نسبة الوفيات وتحسين نوعية الحياة لمرضى سرطانات التجويف الفمي.

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## INTRODUCTION

Oral cancer is a major public health issue worldwide, it remains a highly lethal and disfiguring disease. It makes the whole dental team with important obligations, challenges and a real opportunity to save life <sup>(1)</sup>.

Oral cancer can be defined as a neoplasm involving the oral cavity, which begins at the lip and ends at the anterior pillar of the fauces <sup>(2)</sup>. The most common intraoral malignancy is squamous cell carcinoma. Complications often occur in the mouth, either as a direct result of the malignancy or an unwanted effect of treatment.

A great challenge is that oral cancer are not detected early enough for successful treatment, despite the fact that oral cancer is practically a visible lesion, most dentists or general medical practitioners misdiagnose it for more innocent lesions that clinically show similar appearance.

Dentists already play a pivotal role in the prevention and early detection of oral cancer. A dentist's duty of care includes an obligation to examine the whole mouth and should have enough knowledge about risk factors, medical, social and dental histories.

A thorough visual and digital examination has to be the basis of oral screening. Warnakulasuriya and Johnson <sup>(3)</sup> used toluidine blue mouth rinse as an additional aid for early diagnosis of oral cancer when examining high-risk patients. Oral and maxillofacial surgeons, clinicians and histopathologists are in the frontier for the detection of early oral lesions. Cancer control programs are based on the premise that the earlier cancer is diagnosed, the better the outcome. in terms of increased survival and reduced mortality <sup>(4)</sup>.

There is good evidence that tobacco in all forms and alcohol use with aging are the major risk factors in the development of oral cancer <sup>(5,6)</sup>. Although smoking tobacco offers a more pronounced risk of oral cancer, combining tobacco and alcohol results in an increased cancer incidence many times greater than the additive effect due to their synergistic action.

Epidemiological studies showed that the incidence of oral cancer varies considerably between different parts of the world with the highest levels in the Indian subcontinent and the lowest in Western Europe and North America <sup>(7,8)</sup>.

The most frequently affected sites for oral cancer in Western countries are the ventrolateral aspects of the tongue and the floor of the mouth, which account for over (50%) of the case <sup>(9)</sup>. Other sites affected are buccal, retromolar, gingiva and soft palate mucosa, and the least commonly involved sites being the dorsum of the tongue and hard palate <sup>(10)</sup>. The lip is the most commonly affected site in some communities <sup>(8,11)</sup>.

In the South Eastern part of the Asian continent oral cancer is significantly high, mostly on the buccal and commisural mucosa and is considered as one of the most common ten cancers, this is attributed directly to the use of "especially" unrefined topical tobacco which are kept in the mouth for long periods <sup>(10, 12, 13)</sup>.

According to the report of the WHO in (1997) <sup>(14)</sup>, oral cancer is the sixth most common cancer worldwide.

The present study provides an overall collective retrospective information on squamous cell carcinoma in (1425) Iraqi patients.

## MATERIALS AND METHODS

The cases included in this study were all histologically confirmed squamous cell carcinoma collected from the main centers of pathology in Iraq. These centers usually receive the majority of biopsies from different parts of the country.

Total of (1425) cases (948 males and 477 females) were identified and included in the study. The cases were analyzed according to age, sex, site, patient complain at the time of presentation and histological grading.

## RESULTS

The total number of cases diagnosed histologically as squamous cell carcinoma was (1425). Age and sex distribution is shown in table (1). The highest affected age groups were those between (41) and (70) years; patients at their fifth decade of life were most commonly affected (29.32%). Male to female ratio was (2:1); i.e, (66.57%) vs. (33.43%).

Table (1): Age and sex distribution of (1425) oral squamous cell carcinomas

Age Group	Male	% From Total	Female	% From Total	Total	% From Total
11-20	12	0.85	8	0.56	20	1.4
21-30	47	3.29	21	1.47	68	4.77
31-40	70	4.92	56	3.92	126	8.84
41-50	182	12.78	105	7.36	387	20.14
51-60	291	20.44	163	11.43	454	29.82
61-70	244	17.14	82	5.75	326	22.87
71-80	88	6.17	36	2.52	124	8.7
81<	14	0.98	6	0.42	20	1.4
<b>Total</b>	<b>948</b>	<b>66.57</b>	<b>477</b>	<b>33.43</b>	<b>1425</b>	<b>100</b>

In regard to site distribution (table 2), lower lip was the most commonly affected site (25.6%), followed by the tongue (20.42%) and the lower alveolar ridge, buccal mucosa, floor of the mouth and upper alveolar ridge respectively.

Ulceration and swelling were the most common clinical features at the time of presentation (table 3).

Histological grading of (1323) case (table 4) revealed that that the majority of the cases were well-differentiated squamous cell carcinoma (70.37%).

Table (2): Site and sex distribution of (1425) oral squamous cell carcinoma

Site	Male	% From Total	Female	% From Total	Total	% From Total
Lower Lip	279	19.57	87	6.1	366	25.6
Tongue	169	11.85	122	8.56	291	20.42
Alveolar Ridge (Lower)	101	7.08	65	4.56	166	11.64
Buccal Mucosa	92	6.45	49	3.43	141	9.89
Floor Of Mouth	76	5.33	18	1.26	94	6.59
Retromolar Area	61	4.28	28	1.96	89	6.2
Alveolar Ridge (Upper)	53	3.71	36	2.52	89	6.2
Upper Lip	37	2.59	28	1.96	65	4.5
Hard Palate	40	2.8	23	1.61	63	4.4
Soft Palate	12	0.84	2	0.14	14	0.89
Undefined	29	2.03	19	1.33	48	3.36

Table (3): Clinical presentation

Clinical Presentation	No. of Cases
Ulceration	485
Swelling	324
Pain	74
White Lesions	65
Erythroplasia	19
Bleeding	11
Tongue Fixation	5
Dysphagia	2
Paresthesia	2
Undefined	197

Table (4): Histological grading of (1323) cases according to Broder's classification

State of Differentiation	Number	%
Well-differentiated	931	70.37
Moderately Well-differentiated	171	12.92
Poorly-differentiated	122	9.22
Undifferentiated	99	7.48
Total	1323	100

## DISCUSSION

The incidence of oral cancer varies widely in different parts of the world. The variation is dictated by several factors, mainly habits (tobacco or dietary).

Oral cancer in Iraq has been studied in the form of retrospective studies by a number of investigators<sup>(15,16,17)</sup>. Iraqi National Cancer Registry (INCR) has listed the most common ten cancers for different periods depending on the International Coding System for malignancies. Lip, tongue, salivary glands and mouth were listed as separate entities making each of them out of the range of ten most common cancers. However, considering these regions as part of the oral cavity, oral cancer fall within

or close to the most common cancers in Iraq following breast, bronchi & lung, urinary bladder, Non-Hodgkin's lymphoma and larynx.

Age and sex distribution of squamous cell carcinoma was similar to those reported from most parts of the world, particularly Western countries<sup>(7)</sup>. Ulceration and swelling were the most common complain of the patients at the time of first presentation in the clinic due to delay in the diagnosis and referral to specialized centers. A large number of cases were seen at advanced stages despite the fact that early detection of oral cancer is possible in comparison with other sites of the body. However, health education of the patients and elevation of the diagnostic standards of the general practitioners play an important role in the early detection of oral cancer particularly in the developing countries. This "of course" means less radical treatment modalities and higher survival rate of the patients.

The most commonly affected site was the lower lip. The high incidence of squamous cell carcinoma in this site is due to inclusion of a number of cases in which the skin part of the lip is affected and extended to vermilion border or inner part of the lower lip as proposed by Jovanovic *et al*<sup>(8)</sup>. However, most surgeons and clinicians do not specify the part of the lip when they describe the location of the lesion. On the other hand, in case of extensive lesions it is not possible to know from which part of the lip had the lesion started. Generally speaking, carcinoma of the lip is one of the most common malignancies of the head and neck region. Excluding non-melanoma skin cancer, carcinoma of the lip accounts for roughly (12%) of all head and neck malignancies as well as (25%) of oral cancer<sup>(8)</sup>. Lip cancer frequently involves both skin and oral mucosa in the majority of the cases.

Histological diagnosis and assessment of the degree of the differentiation or grading of the lesion is the duty of the pathologist. Histological grading can act as a helpful factor added to the TNM staging system upon which treatment modality is decided by the surgeon. Unfortunately a number of lesions are reported in the present study and in others as squamous cell carcinoma without the reference to the degree of differentiation. However, the majority of lesions in this investigation were of well-differentiated type.

Large numbers of oral cancer patients seek treatment when the condition was at its advanced stages. Accordingly, two problems arose due to this situation. First, there was a delay in treatment and second, the treatment was more radical and therefore, rehabilitation of the patients was more difficult making postoperative life of the patient harder and lead eventually to higher mortality rate.

It can be concluded that the data regarding oral cancer in Iraq is more comparable to the data reported from Western part of the world<sup>(7,8)</sup> rather than those reported from Southern and Eastern parts of Asia<sup>(12,18)</sup> and some Arab countries<sup>(10,13)</sup>. This is due to the absence of abnormal tobacco habits, which act as one of the most common etiological factors of oral cancer in the countries with high incidence of oral cancer. This study emphasizes on the need for interprofessional and interdisciplinary health care delivery approaches aimed at reducing oral cancer mortality and improving patient's quality of life.

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