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Occurrence of oral and oropharyngeal squamous cell carcinoma among patients in Basrah city

Maha M. Al-mahfoud [1] , Ihsan E. AlSaimary [1] , Ali. A. Al shawi [2]

[1] Department of Microbiology/Collage of Medicine/ University of Basrah.
[2] Collage of dentistry / University of Basrah.

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Abstract: Oral cancer consider as the sixth common malignant disease (it's incidence about third in developing countries and eighth in developed countries). Squamous cell carcinoma (OSCC) account 95% of all oral malignant lesions A few studies have been written in Iraq regarding the incidence of oral cancer.The aim of this study was to identify differences in oral and oropharyngeal squamous cell carcinoma patients according to age groups ,gender, and location of the tumorin Basrah city.This study included 21 patients with oral and oropharyngeal squamous cell carcinoma were clinically diagnosed and then confirmed by histopathological examination. Age, gender, as well as clinical signs and the site of lesions, were recorded.There were 21 new cases of oral and oropharyngeal squamous cell carcinoma in Basrah from September 2015 to December 2016 , 13 in men and 8 in women. Cancer at all oral sites affected men more than women. The Tongue is the most frequent site.

Key Words: SCC, oral ,Oropharyngeal squamous cell carcinoma **.**

Corresponding author: should be addressed (Email: ihsanalsaimary@gmail.com).

Introduction:

In general ,the term oral cancer refers to cancers of the oral cavity and the oropharynx. there are 220 000 new cases per year in men (5% of all cancers and 90 000 in women (2% of all cancers) recorded globally(1). Therefore oral malignancy considers as a large public health problems and one of the few life debilitating oral illness worldwide. It is considered as a highlyfatal and deforming disease (2). More than 90% of tumors in the head and neck are squamous cell carcinoma (3). Therefore it is the commonest malignant tumor of oral mucosa .In the UK and USA Oral cancer, represents about 2% of all malignant tumors, while in India and Srilanka it's about 40% or more Females have a lower incidence than males at all age levels (4). The most important risk factors for OSCC are tobacco and alcohol uptake(5).more than 90% happened in patients over 40 years, for that reason, the incidence of oral cancer is a linear increase with age(6).Age and sex variables have important prognostic factors (7),as well as Environmental carcinogens for example chemicals, radiation and viruses are critical enhancing factors in the advancement of oral cancer (6).

In Iraq, oral cancer represents4.5% of all malignant cases,as recorded by Iraqi cancer registry (8).

The aim of this study was to identify differences in oral and oropharyngeal squamous cell carcinoma patients according to gender, age groups and site of the tumor in Basrah.

Patients and methods:

Data for current analysis were obtained from maxillofacial and ENT unit in Basrah general Hospital and oncology department in Al-Sadder Hospital during the period from September 2015 to December 2016.

The clinical features recorded as well as age ,gender, site of the lesion history of the illness . The clinical diagnosis of oral squamous cell carcinoma then confirmed by histopathological examination through staining with Hematoxyline and Eosin stain.

Clinical details of 21 (13 males and 8 females) patients with oral squamous cell carcinoma was studied, the age ranges in this study were >14 years to<80 years. Statistical analysis of 21 cases of oral squamous cell carcinoma was done.

Figure (1): Lesion of OSCC on the tongue.

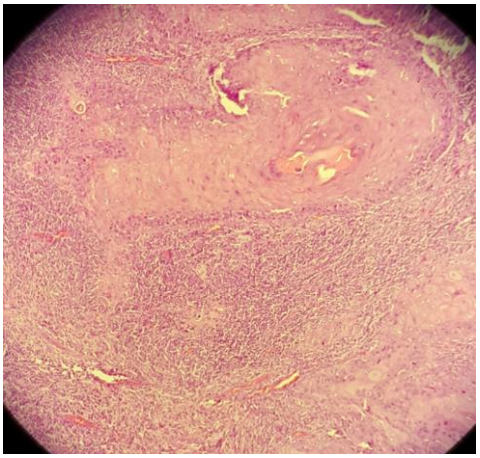

Figure (2): Tissue stained with Hematoxyline and Eosin stain.

Results:

Data were taken from 21 patients with oral and oropharyngeal squamous cell carcinoma including 13 males (61.9%) and 8 females (38.1%) ,with statistically differences between both sexes .P<0.05

.Involved individuals were in the age groups between 14 to 80 years old ,the high frequency of disease was observed

In 51 – 60 year age group (8 cases (38.1%)followed by 31-40 and 41- 50 year age group4 cases for each group(19.04%), while the lowest frequency of disease was observed in 11-20 and 61-70 year age group 1 case for each group (4.76%) (Table 1; Figure 1).

The relationship between the site of the tumor with gender are seen in (Table 2), where the tongue had the highest frequency with 23.8% (5 cases) in both sexes followed by cheeks, palate and oropharynx (14.3%) 3 cases for each site.with statistically differences between totally various sites .P<0.05 (Table 2, Figure 2).

The most common prevalence of patients with oral and oropharyngeal carcinoma was seen in the center of Basrah47.62% followed by 28.57% from other cities in the south of Iraq.with statistically differences between different cities .P<0.05 (Table 3, Figure 3).

Most of the patients with low socioeconomic status (52.38%),while the lower prevalence of cases was among high socioeconomic status (14.3%). with statistically differences between various stats .P<0.05 (Table 4, Figure 4).

Discussion:

In this study , twenty one OSCC surgical specimens were evaluated and analyzed , therefore the incidence and prevalence could not be expressed ,yet there was a correlation between present and previous data regarding the incidence of OSCC in Iraq.

Concerning development of OSCC in patients over 40 years of old (76.2%), this is in agreement with previous studies in Iraq (9,10) as well as other studies in the world, (11,12).

This result may be attributed to defect in innate and adaptive immune responses in old persons (13,14), and long period of exposure to different carcinogens such as chemicals, radiation and viruses which are important risk factors in the development of oral cancer (15,16).

Oral carcinoma occurs less frequently in women than in men this may be due to increase exposure to risk factor by men(17). In addition to other intrinsic factors like malnutrition or iron deficiency anemia that may present in males more than in females(18,19).Poor oral hygiene which consider as having a identical modifying effect may explain increase the incidence in male than in females patients (20,21).

Although the result was not significant , but the most frequent site of OSCC lesion was on the tongue both in male and female patients ,this result in agreement with other Iraqi study in 2013 (22),and with studies in European and the US populations(17,18), but the most common site among Asian populations is bucal mucosa which is attributed to betel quid/tobacco chewing habits (23).

The percentage of OSCC cases was reported in the center of Basrah (47.62%) more than in rural area (23.81%), this result can be attributed to the presence of many hospitals and the location of the oncology center in Basrah which made the referral cases reach the institute easier

Most patients are with low socioeconomic status ,this may be due to involvement of these patients in habits that are less healthy, like tobacco and alcohol consumption, in addition eating fewer fruits and vegetables, than those of higher socioeconomic status.

Yet, studies on the correlation between socioeconomic factors and the incidence of OSCC are disagreeing(24).

Table (1): Number of patients and their distribution according to age and gender. P<0.05

Age group(yrs.)	Male		Female		Total		P value
	No	%	No	%	No	%	
11-20	1	4.76	0	0	1	4.76	NS
21-30	0	0	0	0	0	0	NS
31-40	3	14.3	1	4.76	4	19.04	NS
41-50	2	9.52	2	9.52	4	19.04	NS
51-60	4	19.04	4	19.04	8	38.1	0.05
61-70	1	4.76	0	0	1	4.76	NS
71-80	2	9.52	1	4.76	3	14.3	NS
Total	13	61.9	8	38.1	21	100	0.05

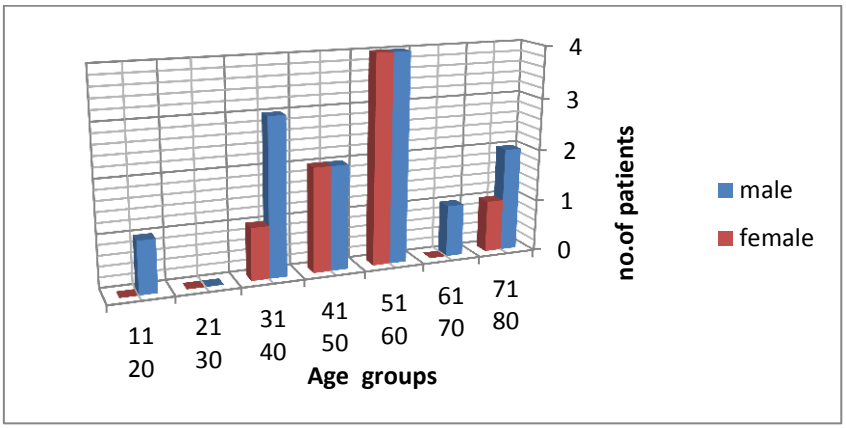

Figure (1): Number of patients and their distribution according to age and gender. P<0.05.

Table (2): Distribution of patients based on the site of the lesion and gender. P<0.05.

Sites of tumor	Male		Female		Total		P value
	No	%	No	%	No	%	
palat	2	9.5	1	4.8	3	14.3	NS
Tongue	3	14.3	2	9.52	5	23.8	NS
cheek	2	9.52	1	4.76	3	14.28	NS
submandibular	0	0	2	9.52	2	9.52	NS
orpharynx	3	14.3	0	0	3	14.3	NS
maxilla	1	4.76	1	4.76	2	9.52	NS
Post nasal space	1	4.76	0	0	1	4.76	NS
Supra-glottic	0	0	1	4.76	1	4.76	NS
Jaw	1	4.76	0	0	1	4.76	NS
Total	13		8		21	100	

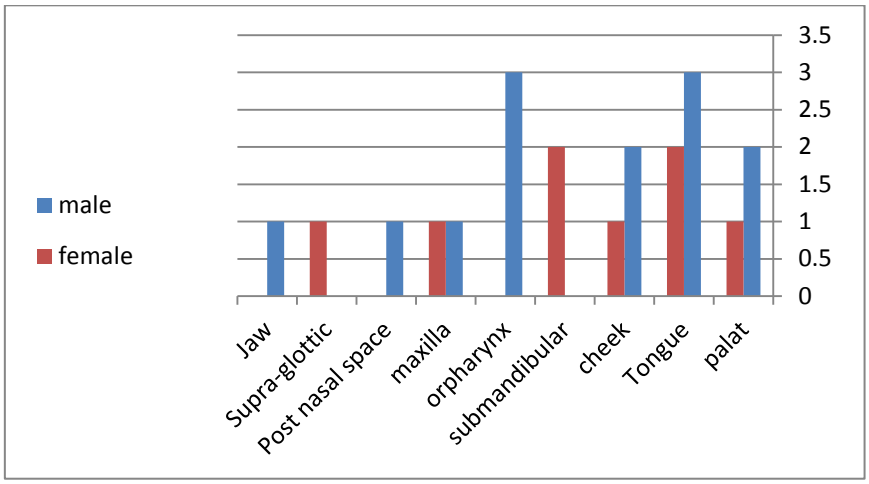

Figure (2): Distribution of patients based on the site of the lesion and gender.P<0.05

Table (3): Distribution of patients according to residency. P<0.05.

	Urban %	Rural %	Other city*%	Total	P value
Male	8(38.09%)	2 (9.52%)	3 (14.28%)	13 (61. 9%)	0.05
Female	2 (9.52%)	3 (14.28%)	3 (14.28%)	8 (38.1%)	0.05
Total	10 (47.62%)	5 (23.81%)	6 (28.57%)	21 (100)	0.05

***Other cities : Thiqar and Messan.**

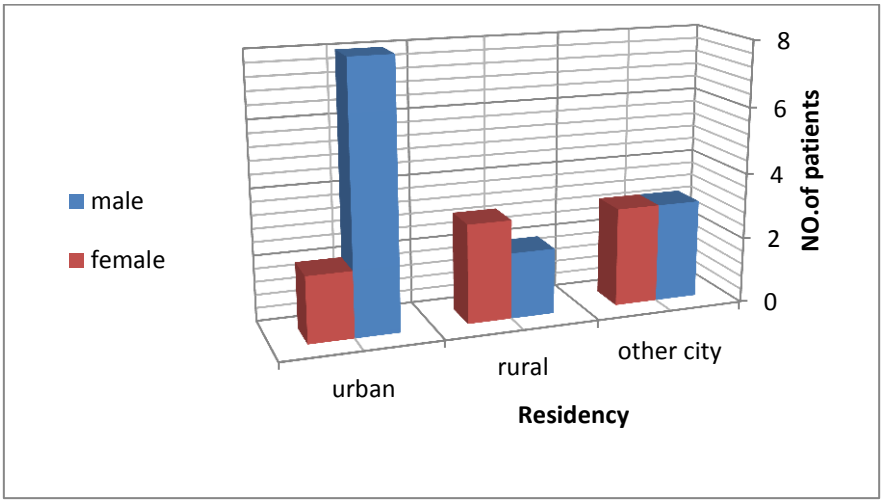

Figure (3) : Distribution of patients according to residency.

Table (4): Distribution of patients according to socioeconomic states and gender.

socioeconomic states	No. of cases		Total	P value
	Male %	Female %		
Low	5(23.81%)	6(28.57%)	11(52.38%)	NS
Middle	5(23.81%)	2(9.52%)	7(33.33%)	0.05
High	3(14.29%)	0	3(14.3%)	0.05
Total	13	8	21(100)	0.05

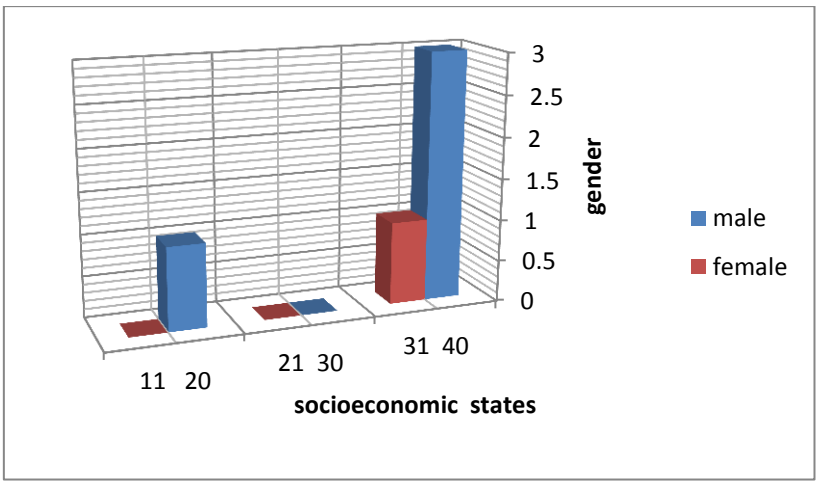

Figure (4): Distribution of patients according to socioeconomic states and gender. <0.05.

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