

Malignant Oral Lesions in Sulaimania Governorate/ a (5 Years) Retrospective Study

Hassanain H.Khudier (MBChB, FIBMSpath.)

Abstract

Background: Cancers of the oral cavity and oropharynx represents approximately three percent of all malignancies in men and two percent of all malignancies in women in the United State.

Squamous cell carcinoma, which arises from the oral mucosal lining, accounts for 90%- 95% of oral cancer.

Objective: aim of this study is to detect oral cancers in Sulaimania and to know what is the most common type and its commonest location in comparison to other studies.

Patients&Methods: During the period from 1st Jan. 2004 to 30th June 2009, all histopathological reports in Sulaimani city with diagnosis of oral cancers for patients attended and performing biopsies for suspected oral lesions were included.

These biopsies were received, processed and embedded in paraffin, sectioning, then stained by Haematoxylin and Eosin stain.

All collected information were analyzed according to age, sex, site and histopathological diagnosis.

Results: Oral cancers were diagnosed in 82 out of 665 oral lesions (represented as 12.33% from the total number of oral lesion biopsies).Squamous cell carcinoma (SCC) was the most common type of the malignant neoplasm of oral cavity found in 46 cases (56.1%).Most frequent cases found in the age distribution range between 50 -70 years with M: F ratio 1.2:1. The most common affected site was the lower lip(39%) followed by the tongue(20%).

Malignant neoplasms of salivary glands included 16 cases (19.6%),female 10, male 6 with F:M ratio is 1.66:1.

Conclusion: The most common oral cancer in sulaimania is SCC of oral mucosa affecting mainly the old age group, and males affected more than females, and the most common location is the lower lip. The second most common cancer is salivary gland carcinoma and commonest histological type is adenocarcinoma.

Key words: Oral cancer(OC), Squamous cell carcinoma(SCC), oral lesions(OL).

Department of Pathology /College of Medicine / University of Sulaimani/ Sulaimani/ Iraq.

Introduction

Cancers of the oral cavity and oropharynx represents approximately three percent of all malignancies in men and two percent of all malignancies in women in the United State.[1]

Squamous cell carcinoma, which arises from

the oral mucosal lining, accounts for 90%- 95% of oral cancer.[2,3]

Oral cancer most commonly occurs in middle aged &older individuals, although a disturbing number of these malignancies is also being documented in younger adults in recent years.[4,5]

Cancers of the lip vermillion are more akin epidemiologically to SCC of the skin & occur primarily in white men[6]. These lip tumors are most strongly associated with chronic sun exposure, although sometimes they have been related to the site where cigarettes or pipe stems have habitually been held[7].

This strong association between cancers of the oral cavity & oropharynx with tobacco use is well established .Epidemiological studies show that the risk of developing oral cancer is five to nine times greater for smokers than for nonsmokers and this risk may increase to as much as 17 times greater for extremely heavy smokers of 80 or more cigarettes per day.Alcohol use has been identified as a major risk factor for cancers of the upper aerodigestive tract. Moderate to heavy drinkers have been shown to have 3-9 times greater risk to developing oral cancer. [8-12]

Both heavy smokers and heavy drinkers can have over 100 times greater risk to developing malignancy.[10,11]

Recent evidence suggests that HPV may be associated with some oral &oropharyngeal cancers.[13,14]

Dietary factors , such as a low intake of fruits & vegetables, may also be related to an increase cancer risk.[15,16]

Iron deficiency anemia is associated with an elevated risk for developing of carcinoma of the oral cavity, oropharynx and esophagus.[17,18].

Early SCC often presents as a white patch (leukoplakia) , red patch (erythroplakia), or mixed (erythroleukoplakia).ca Leukoplakia is the most common precancer representing 85% of such lesions. [19,20]

Pain is not a reliable indicator as to whether a particular lesion may be malignant; larger, advanced carcinomas will often be painful, but many early oral cancers will be totally asymptomatic or may be associated with only minor discomfort. [21]

As the lesion grows, it may becomes an exophytic mass with a fungating or papillary surface. Other have an endophytic growth pattern that is characterized by a depressed ulcerated surface with a raised, rolled border. [21,22]

Materials and Methods

The histopathological reports were collected from 1st Jan. 2004 to 30th June 2009. These reports were reviewed to identify oral cancer for patients attended and performing biopsies for suspected oral lesions.

These biopsies were received, processed and embedded in paraffin, sectioning, then stained by Haematoxylin and Eosin stain.

The reports were obtained from histopathological laboratories of the following:-

1. Sulaimania Teaching Hospital.
2. Saif AL-dain consultant clinic (MOH).
3. Shoresh military hospital.

All collected information were analyzed according to age, sex, site and histopathological diagnosis.

Results

Oral cancers were diagnosed in 82 out of 665 oral lesions (represented as 12.33% from the total number of oral lesion biopsies), 42 females, 40 males with F: M ratio 1.05:1 as shown in **Table (1)**.

The types of oral malignant neoplasms according to sex distribution are illustrated in **Table (1)** which shows that squamous cell carcinoma (SCC) was the most common malignant neoplasm of the oral cavity in both sexes which found in 46 cases (56.1%) with M: F ratio 1.2:1, followed by adenocarcinoma of the salivary glands found in 7 cases (8.6%), lymphoma (7.3%), mucoepidermoid carcinoma (4.9%), adenoid cystic carcinoma (4.9%), , rbdomyosarcoma (4.9%) , verrucous carcinoma (2.4%), osteosarcoma (1.2%), and others.

Most frequent cases found in the age distribution range between 50 -70 years

In both sexes as shown in **Figure (1)**.

The most common affected site of SCC was the lower lip 18 cases (39%) followed by the tongue found in 9 cases (20%), upper lip (11%). **Figure (2), table (2)**.

Malignant neoplasms of salivary glands included 16 cases (19.6%), female 10, male 6 with F:M ratio is 1.66:1. Histologically included the following: adenocarcinoma 7

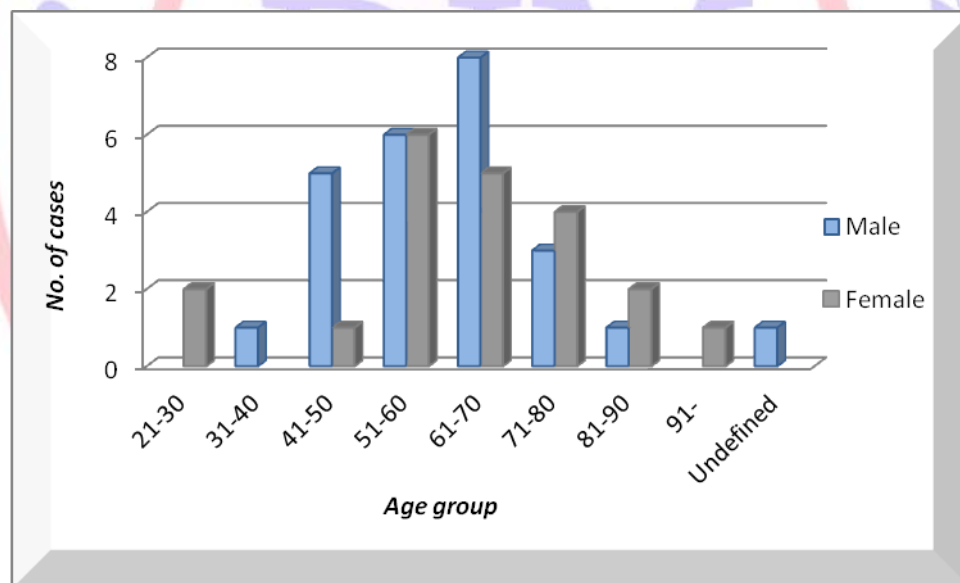
cases, adenoid cystic carcinoma 4 cases, mucoepidermoid carcinoma 4 cases, and malignant mixed tumor only one case. In the present investigation, the second most common type of all oral malignant neoplasms was adenocarcinoma which represented 8.6% **Table (1)**.

Table (1): Types and sex distribution of malignant neoplasms.

Malignant neoplasm	M	F	T	%
Squamous cell carcinoma	25	21	46	56.1
Adenocarcinoma of salivary g.	4	3	7	8.6
Adenoid cystic carcinoma of salivary g.	1	3	4	4.9
Mucoepidermoid carcinoma of salivary g.	-	4	4	4.9
Malignant mixed tumor of salivary g.	1	-	1	1.2
Metastatic carcinoma	1	2	3	3.7
Hodgkin's lymphoma	1	-	1	1.2
Non- Hodgkin's lymphoma	3	2	5	6.1
Verrucous carcinoma	-	2	2	2.4
Osteosarcoma	1	-	1	1.2
Rhabdomyosarcoma	1	3	4	4.9
Malignant fibrous histocytoma	-	1	1	1.2
Undifferentiated malignancy	1	1	2	2.4
Malignant melanoma	1	-	1	1.2
Total	40	42	82	100

Table (2): Site distribution of SCC.

Site of SCC in oral cavity	N0.	%
Lower lip	18	39
Tongue	9	20
Upper lip	5	11
Mandible	4	9
Cheek	4	9
Palate	3	6
Floor of the mouth	2	4
Maxilla	1	2
Total	46	100

**Figure (1):** Age and sex distribution of the SCC biopsies.

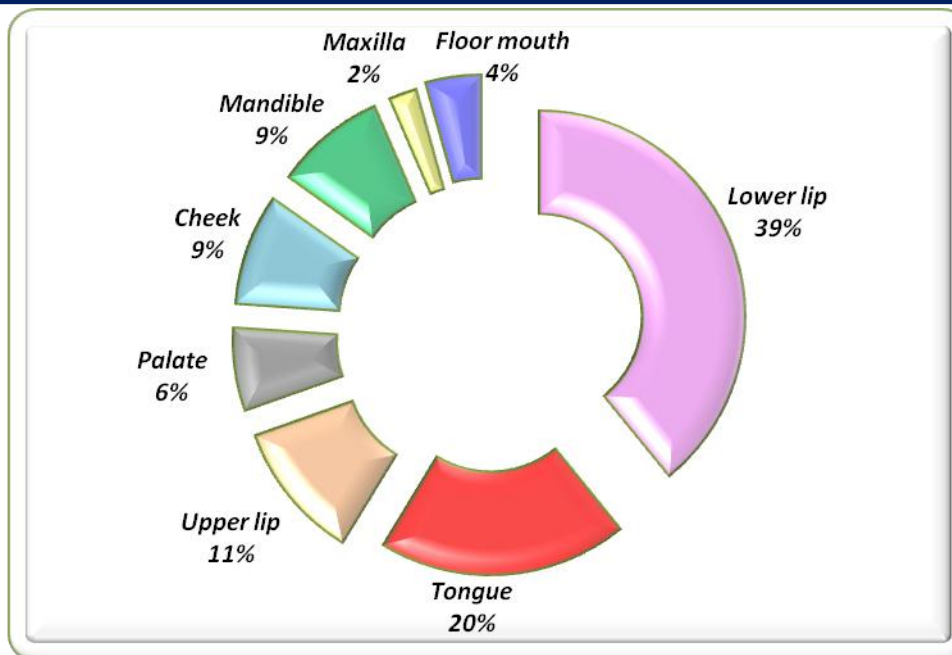


Figure (2): Site distribution and percentage of the SCC.

Discussion

In the present study, out of the 665 oral biopsy specimens, 82 cases (12.33%) were diagnosed as malignant lesions of different types; the majority of these cases were squamous cell carcinoma (SCC) found in (56.1%) of all malignant neoplasm, similar percentage of malignant lesions found in another study carried out in Iraq[30] .

In a review of 2479 oral lesions referred to the Department of Oral Pathology, College of Dentistry, University of Baghdad found that 259(10 %) of cases were oral cancers[31].

Hassawi *et al* (2009) studied 303 cases of primary tumors and tumor like lesions of the oral cavity which were collected in Mosul city and found that 39 (12.8%) of cases were malignant oral lesions[32] .

In Iran, in 2007 they found that out of the 4553 oral biopsy specimens, 283 cases (6 %) only were oral malignant lesions[33], similar result found in a retrospective analysis of 244 cases of the gingival lesions performed on South Indian population[34].

In the USA, 10414 oral specimens were examined histologically which revealed that 2% only were malignant[35].

From the results of this study and other studies from the Middle East, it is obvious

that the percentage of malignant lesions among other oral lesions is more than that reported in western countries. The possible explanation for this discrepancy is that oral and maxillofacial surgeons in western countries submit biopsies of all oral lesions for histopathological diagnosis, while in developing countries, surgeon concentrates on suspicious lesion only for histopathological diagnosis. In addition to education of patients, education of medical staff, registration system and oral health care are effect such results.

The commonest oral cancer found by the present study was squamous cell carcinoma followed by adenocarcinoma , mucoepidermoid carcinoma , adenoid cystic carcinoma , lymphoma, rabdomyosarcoma , verrucous carcinoma and osteosarcoma.

Talabani *et al* (2009) carried a survey in Sulimani city through the period (1995-2005) and found that commonest malignant lesions were again squamous cell carcinoma (72%) followed by adenocarcinoma (5.5%),mucoepidermoid carcinoma (4.1%), adenoid cystic carcinoma (2.7%),lymphoma (2.73%), osteosarcoma(1.36%) and verrucous carcinoma (1.36%) [36] .

This study revealed that the lower lip was the most commonly affected site by oral cancer (18 cases, 22 %). This observation is in agreement with the previous Iraqi studies [42-45].

Epidemiological studies have shown that the site of occurrence for oral cancer differs widely. In studies published from USA, Canada, Kuwait, Australia and Iraq, the lower lip was the most frequent site of oral cancer [46,47,48], while in other countries such as Brazil [49], Scotland [50], Saudi Arabia [51] and France [46] the tongue was the most frequent site of oral cancer. In South East Asia (India), buccal mucosa was the most frequent site of oral cancer [52].

The vast majority of lip cancer cases occurred in the lower lip which can be explained by higher exposure of this area to the solar radiation of sun because of its anatomical position.

Conclusions

1. SCC is the most common oral malignant neoplasm followed by salivary gland carcinomas.
2. Lower lip is the most common site for SCC.
3. Most frequent oral cancers found in old age group (51-70 years).

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