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The incidence of oral metastasis of systemic malignancy in a sample of Iraqi patients

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Abstract

This study was done to investigate the incidence of secondary oral malignant tumors that metastasis from other parts of the body in the Iraqi patients that affected with oral malignancy which may be a valuable in early discovery of malignancy and saving patient's life.

This study was conducted through the analysis of data base collected from records in the histopathology lab in Specialized Surgery Hospital in Baghdad which belong to patients attended maxillofacial surgery department at period 2005-2009 and their number was 122 patients.

The analysis included age, sex, malignant and benign lesions and type of malignant lesions. The results showed equal male to female ratio (55.47%) of the patients complained from malignant lesions; while (44.26%) were affected by benign lesions.

Non-Hodgikn's lymphoma was the only systemic malignancy which showed oral manifestation in this sample.

We concluded that further investigations are needed to know the real incidence of this type of malignancy.

Introduction

Oral cancer can be defined as the neoplasm of lip, toangue, and intraoral tissue including oro-pharynx and it accounts for less than 5% of all malignancies of the body.⁽¹⁾

Most of oral malignancy arises from different sites of oral cavity as primary lesions due to chronic exposing of oral mucosa to tobacco and alcohol in addition to infection with different type of bacteria and viruses.⁽²⁾

Metastasis tumors to the oral cavity and jaws are uncommon and comprise 1% to 3.2% of all malignant oral

neoplasm^{(3),(4)}; such metastasis follows 2 recognized patterns either to the bones of the oral region which may be associated with secondary extension into the adjacent oral soft tissues or metastasis that involves only the oral soft tissues with out any evidence of bone involvement.⁽⁵⁾

Metastasis tumors of the jaw bones are more common than metastasis to the oral soft tissues which constitute only 0.1% of all malignant lesions and involve mostly the gingival and alveolar mucosa followed by tongue and less frequently the tonsil ,palate

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,lip , buccal mucosa and floor of the mouth⁽⁶⁾.

Because of its uncommon occurrence ;metastasis are a diagnostic challenge for the clinician and must be differentiated from other lesions, such as benign neoplasm ,cysts, primary malignancies and systemic disease that involve the oral soft tissues.

Oral changes may be the first indication of an undiscovered remote primary malignancy that is other wise totally asymptomatic.Many researches and studies had been done on oral malignant lesions in Iraqi patients, but the oral metastasis of systemic malignancy from other parts of the body wasn't studied well.

The aim of this study was to investigate the incidence of occurrence of secondary oral tumors or metastases tumors from remote malignant lesions.

Material and methods

A sample of 122 patients who are taken as data base from the records files of Teaching Laboratories in Specialized Surgery Hospital in Baghdad.

Those patients complained of oral tumors from the period from 2005-2009; who admitted the department of maxillofacial surgery in Specialized Surgery Hospital in Baghdad.

The data collected included malignant and benign oral tumors with analysis to age, sex, and type of malignant lesions.

Results

The male cases were (60) = (49.18%) while female cases (62) = (50.81%) as seen in table (1). The number of malignant lesions was (68) = (55.74%) while number of benign cases was (54) = (44.26%) as seen in table (2).

The malignant lesions were classified according to their histopathological origin and illustrated in table (3).

Types of non-Hodgkin's lymphoma were subdivided according to their site in oral cavity into gingival enlargement (1), sub-lingual salivary gland (1), and sub-mandibular swelling (3) cases table (4).

Age distribution of 122 cases was shown in table (5).

Discussion

Many studies on oral tumors in Iraq have been published ^{(7) (8) (9)(10)(11)} but the incidence of secondary oral tumors or metastasis of malignancy to oral cavity has been not reported in Iraq.

Metastasis tumors to the oro-facial region from various primary sites show differences in oral site preference. This diverse site distribution is probably caused by the distinct biological behavior of the individual primary tumors.

Tumors from breast, adrenal gland, prostate, eye and thyroid gland preferentially metastasize to the jaw bones and rarely found in the oral soft tissue.⁽¹²⁾

Metastasis tumors to the oral soft tissue occur primarily in the fifth to seventh decade and the primary tumor site exhibits gender preferences ⁽¹³⁾. The most common primary sites in males include the lung, followed by kidney ,bone, and the colon and rectum where as in females, the primary tumor site is the breast ,followed considerably less frequently by the genital organs and kidney.⁽¹²⁾

Attached gingiva is most affected locations in the oral cavity by metastasis tumors. This may be occur due to that cells are likely entrapped in the rich capillary network of chronically inflammed attached gingiva

and the proliferating new capillaries in the inflamed gingiva possess fragmented basement membranes and these are leaky.⁽¹⁴⁾

In our study we failed to observe any type of oral secondary tumors metastasize from other region of the body because all histopathological findings revealed malignancy from oral origin in addition to the absence of medical history of remote malignancy.

In the present study, too, we found that non-Hodgkin's lymphoma was the only type of systemic malignancy which shows oral manifestation in our sample and absence of other types of systemic malignancies; this in accordance with other Iraqi studies on malignant tumors of oral cavity^{(7) (8) (9)(10)(11)}

Salivary glands are very rare sites for primary lymphoma, while secondary involvement is more common⁽⁸⁾. Involvement of gingival tissue by primary non-Hodgkin's lymphoma was reported to be more than other parts of oral cavity⁽¹⁵⁾ this due to that immuno-suppression factors are predisposed to develop malignant neoplasm due to lack of effective immunological surveillance so that the newly created malignant cells cannot be recognized and destroyed at an early stage of the neoplasms.⁽¹⁶⁾⁽¹⁷⁾

Metastasis lesions in the oral soft tissues can cause progressive symptoms; including pain, bleeding, super-infection, dysphagia, interference with mastication and disfigurement⁽¹⁸⁾⁽¹⁹⁾⁽²⁰⁾⁽²¹⁾

In conclusion, recent data indicate that we need further specific researches about metastasis malignant tumors to oral cavity to find the prevalence of this type of malignancy among Iraqi populations to compare the results with other populations.

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Table (1) distribution of male to pfemale ratio in 122 patients

Sex	No. of cases	%
Male	60	49.18%
Female	62	50.81%
total	122	100%

Table (2) distribution of malignant to benign tumors among 122 patients

Type of tumor	No. of cases	%
Malignant	68	55.74%
Benign	54	44.26%
total	122	100%

Table (3) distribution of malignant lesions among 68 patients

Malignant tumor	No. of cases	%
Squamous cell carcinoma	53	77.94%
Adenoid cystic carcinoma	2	2.94%
Spindle cell tumor	1	1.47%
Ameloblastic carcinoma	1	1.47%
Basal cell carcinoma	1	1.47%
Malignant myoeptheliumoma	2	2.94%
Sinonasal carcinoma	1	1.47%
Non-Hodgkin's lymphoma	5	7.35%
Malignant mixed tumor	2	2.94%
Total	68	100%

Table (4) sites of non-Hodgkin's lymphoma in 5 patients affected

Site	No.of cases	%
Gingival enlargement	1	20%
Sub-lingual sal.gland	1	20%
Sub-mand swelling	3	60%
total	5	100%

Table(5) age distribution of 122 patients

Age	No. of cases	%
Months	2	1.64%
1-10yr	9	22.22%
11-20yr	15	13.33%
21-30yr	17	11.76%
31-40yr	15	13.33%
41-50yr	23	8.7%
51-60yr	14	14.29%
61-70yr	14	14.29%
7oyr>	13	15.38%
total	122	100%