
SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK, RETROSPECTIVE STUDY OF 1011 CASES IN BASRAH PROVINCE

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Summary

Histopathological reports of 1011 patients with squamous cell carcinoma (SCC) of the head and neck diagnosed in the pathology department in Basrah Saddam Teaching Hospital and in Al-Wiswasy Private Laboratory in the period 1984-2000 and in two periods 1984-1990 and 1991-2000 were retrospectively evaluated. The patients were classified according to their age, sex and primary tumour localization. There were 763(75.5%) male and 248(24.5%) females with a male to female ratio of 3:1. The three commonest primary tumour localization were the larynx 560 cases (55.4%), the oral cavity 305 cases (30.2%) and the nasopharynx 90 cases (8.9%). The peak age incidence for all primary tumour localization was observed in the 6th decade. Among all primary tumour localization male predominance was found. The total numbers of the cancer cases in the 2nd period were more than the 1st period with arises of 50%.

Introduction

HHead and neck cancers of the [oral cavity, pharynx and larynx] make a big contribution to the burden of cancers in developing countries¹. They constitute 7% of all cancer patients in Turkey². In Saudi Arabia, SCC of the head and neck constitute 11% of all cancer cases³. The incidence is also high in Yemen (Hajjah), all of whom had a habit of kath chewing, which may be considered as an

important contributing factor¹.

In Iraq, head and neck cancers show high incidence, it constitute about 10% of the total cancer cases according to Iraqi cancer registry⁴. Laryngeal cancer was found to be the 5th commonest cancer in Iraq during the above mentioned period (1995-1997). Furthermore, SCC was found to be the most common histological type of the head and neck cancers.

Epidemiological investigations mentioned that numerous factors associated with the development of SCC of the head and neck. Tobacco and alcohol are the major risk factors, diet and mainly

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nutritional deficiencies have been found to increase risk also. Ionizing radiation have also identified as unequivocal risk, occupational exposures play minor though definite role in the development of head and neck cancer, for sinonasal cancer, occupational exposures are the major determinants of the disease⁵, kath chewing in Yemen as we mentioned¹, and Marijuana which is the most commonly used illegal drug in the United States in some subcultures⁶ are also risk factors. However, recent studies support an etiologic role of human papilloma virus in a subset of head and neck SCC particularly poorly differentiated arising from Waldeyer's tonsillar ring⁷. A population based study analyses familial risk factor in the development of the head and neck SCC before the age of 45⁸.

This study is a descriptive analysis of 1011 cases of SCC of the head and neck in Basrah in two different periods (1984-1990) and (1991-2000).

Materials and Methods

Histopathological reports of 1011 patients of SCC of the head and neck diagnosed in the pathology department of Basrah Saddam Teaching Hospital and Al-Wiswasy Private Laboratory from 1984-2000 were retrospectively evaluated.

The patients were classified in two different periods (1984-1990, 1991-2000) according to their age, sex, primary tumour localization and emphasis was given to the past history of smoking.

Results

In this study the total number of head and neck SCC over the 17 years period was 1011 cases, 325 cases/7 years (46

cases / year) in the 1st period and 686 cases / 10 years (69 cases / year) in the 2nd period i.e. the rise is 50%.

Tumour localization: laryngeal SCC was found to be the commonest site of localization over the 17 years period, it constitute 560 cases (55.4%), supraglottic SCC formed 375 cases (67%) and glottic SCC formed 185 cases (33%) of the total laryngeal SCC. The ratio of supraglottic to glottic SCC was 2:1. Laryngeal SCC was also found to be the commonest type, it constitute 175 cases (53.8%) and 385 (56.1%) in the 1st and 2nd period respectively.

Oral SCC was found in 305 cases (30.2%) of the total malignant cases, 95 (29.2%) in the 1st period and 210 (30.1%) in the 2nd period [42% in the lip, 32% in the anterior 2/3 of the tongue, 13% in the hard palate, 5.5% in the floor of the mouth, 5% in the buccal mucosa and 1.5% in the gingiva]

Nasopharyngeal SCC constitute 90 cases (8.9%) of the total malignant cases, 33 cases (10.2%) in the 1st period and 57 cases (8.9%) in the 2nd period.

Oropharyngeal SCC constitute 24 cases of the total malignant cases (2.4%), 10 cases (3%) in the 1st period and 14 cases (2%) in the 2nd period, [52% in the base of the tongue, 40% in the tonsils and 8% in the soft palate].

Hypopharyngeal SCC was found in 17 cases (1.7%) of the total malignant cases, 7 cases (2.2%) in the 1st period and 10 cases (1.5%) in the 2nd period, [65% in the pyriform sinus, 25% in the post cricoid area and 10% in the posterior pharynx].

SCC of the nasal cavity and paranasal sinuses constitute 15 cases (1.5%) of the total malignant cases, 5 cases (1.5%) in the 1st period and 10 cases (1.5%) in the 2nd period.

Primary tuomour localization	1984 - 2000				1984 - 1990				1991 - 2000			
	Male	Female	Total	%	Male	Female	Total	%	Male	Female	Total	%
Larynx	420	140	560	55.4	130	45	175	53.8	290	95	385	56.1
Oral	230	75	305	30.2	65	30	95	29.2	165	45	210	30.6
Nasopharynx	70	20	90	8.9	22	11	33	10.2	48	9	57	8.3
Oropharynx	18	6	24	2.4	8	2	10	3	10	4	14	2.0
Hypopharynx	15	2	17	1.7	5	2	7	2.2	10	0	10	1.5
Nasal cavity and paranasal sinuses	10	5	15	1.5	4	1	5	1.5	8	2	10	1.5
Total	763	248	1011	100	234	91	325	100	531	155	686	100

Table I. Primary tumour localization and sex distribution of the patients with SCC of the head and neck in the period (1984-2000) and during the two different periods.

Primary tumour localization	1984 - 1990								1991 - 2000							
	<30	30-39	40-49	50-59	60-69	70-79	>80	Total	<30	30-39	40-49	50-59	60-69	70-79	>80	Total
Larynx	3	12	30	75	35	15	5	175	9	25	75	170	56	45	5	385
Oral	3	10	20	35	19	6	2	95	9	15	40	85	31	19	10	210
Nasopharynx	2	1	7	15	5	2	1	33	1	3	10	30	7	5	1	57
Oropharynx	0	0	3	5	2	0	0	10	0	0	4	6	4	0	0	14
Hypopharynx	0	0	3	4	1	0	0	7	0	0	2	5	2	1	0	10
Nasal cavity and paranasal sinuses	0	0	1	3	1	0	0	5	0	0	1	4	2	2	1	10
Total	8	22	64	137	63	23	8	325	19	43	132	300	102	72	18	686

Table II. Primary tumours localization and age distribution of the patients with SCC of the head and neck two different periods.

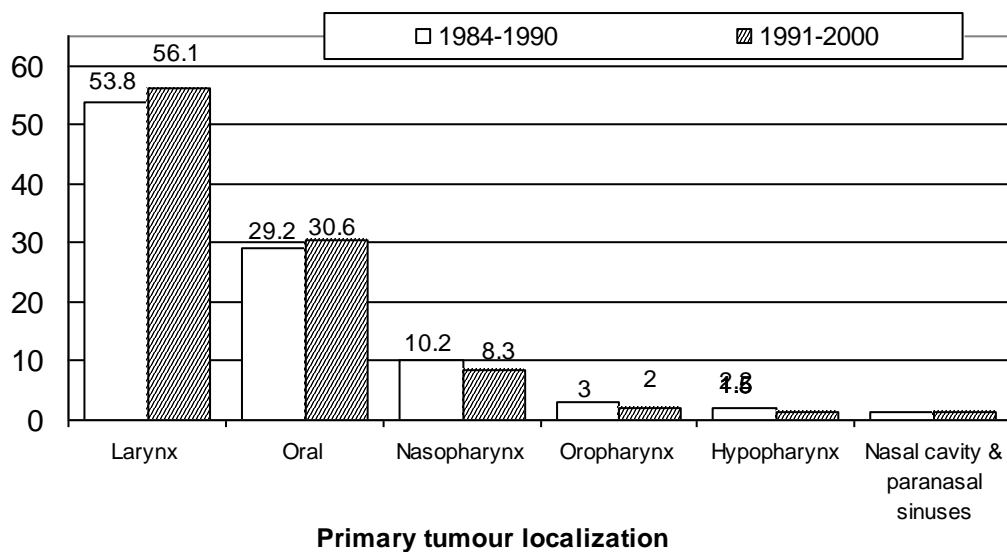


Figure 1. The percentage of primary tumour localization in the two periods.

Figure I demonstrate the percentages of the primary tumour localization of the 1st and 2nd period.

Age: the age distribution of the total 1011 cases according to the primary tumor localization was shown in Table II. In both periods the peak age incidence of all primary tumour localization was observed in the 6th decade of life.

Sex: out of the total malignant cases in the 1st period there were 234 (72%) male and 91 (28%) females and the ratio of M: F was 2.6:1 and there were 531 male (77.4%) and 155 (22.5%) female in the 2nd period and the ratio of M: F was 3.4: 1 and in both periods 80% of the male patients were smokers.

Discussion

In this study, there is percentage rise of 50% of the total malignant cases and 54% in the percentage of the laryngeal SCC in the 2nd period. This increase may not reflect true increase in the incidence of this total malignant cases, because we do not have any idea about the real total population in Basrah in the 1st and 2nd periods. In the 1st period, most of the people were emigrated from Basrah to other parts of Iraq because of the Iraqi-Iranian war and most of the patients were referred to Baghdad to continue their treatment and investigations, while in the 2nd period most of the people return to Basrah, also there is an increase in the awareness of people about cancer and their fear from any complaint, because of the increase in the number of new cancer cases due to the effects of radiation of the depleted uranium missiles used by the U.S.A. and U.K. military forces against Iraq in 1991 war, making the people seeking medical advices early in the disease. Dietary

deficiency due to economic sanctions on Iraq may also be a factor in this increase.

Laryngeal SCC was found to be the commonest primary site of tumour localization in both periods. Similarly laryngeal SCC was found to be the commonest cancer among all SCC of the head and neck in Turkey forming 71%⁹. While in Yemen laryngeal SCC constitute 8% of all SCC of the head and neck¹ and in USA it constitute only 1% of all new cancer cases¹. There is geographical variation with regard to the involved region of larynx by SCC, glottic SCC is reported to be the commonest of all laryngeal cancer in USA as well as in Australia and Japan^{10,11,12}. It ranges from 51-77% in these countries. However, supraglottic to glottic SCC ratio of 1.8: 1 and 2.1: 1 have been reported from Yugoslavia and Finland respectively¹, similarly the frequency of supraglottic SCC in France, Spain, Italy is between 60% and 48%¹. In this study the supraglottic region was the most common site among all laryngeal SCC, with a supraglottic to glottic SCC ratio of 2:1 which was consistent with data from Turkey and Yemen^{1,2,4}.

Oral SCC was the 2nd most common SCC of head and neck. It constitute 30.2% of total cancer cases and no significant differences in the percentages during the two periods, while oral SCC was the most common of the total SCC of the head and neck in Yemen (47%)(1) and high incidence was also reported in Saudi Arabia³, while a study from Turkey reported only 4% of oral cancer among the head and neck SCC⁹. The most common primary site in his study was the lip similarly reported in Turkey⁹, while the tongue was the commonest site in Yemen¹.

The third most common SCC of the head and neck was nasopharyngeal SCC. It constitutes 8.9% of the total malignant cases. In Yemen naso-pharyngeal SCC

constitute the 2nd most common SCC of the head and neck forming 42%¹. Also the incidence is high in Saudi Arabia³, and in Turkey⁹ the incidence was 10% and in Jordan the incidence was low (1% of all malignant cases)¹⁴. Among the Chinese population of North America, the incidence of nasopharyngeal SCC of the head and neck was very high (18%) of all malignant tumours¹⁵.

In this study, low percentages of the oropharyngeal SCC, hypopharyngeal SCC and SCC of the nasal cavity and paranasal sinuses. Similarly, low incidence was also reported from other studies in Yemen¹, Saudi Arabia³ and

Turkey⁹.

In both periods the peak age incidence for all primary tumour localization was observed in the 6th decade of life, this is consistent with other studies from Yemen, Saudi Arabia and Turkey^{1,3,9} male predominance was most remarkable among all primary tumour localization in both periods with a ratio of 2.6:1 and 3.4:1 in the 1st and 2nd period respectively, similar male predominance was observed in Yemen, Saudi Arabia and Turkey^{1,3,9}.

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