

Lip cancer: A 16-year retrospective epidemiological study in Eastern part of Turkey

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Abstract

Objective: To review lip cancer patients with respect to age, gender, location and histological type of tumour, and risk factors.

Methods: This retrospective study was conducted at the Yuzuncu Yil University, Van, Turkey, and comprised medical records of the histologically confirmed lip cancer patients who presented between 1994 and 2010. No patient had neck nodes or evidence of distant metastasis.

Results: Of the 91 patients 73(80.22%) were men and 18(19.78%) were women. The overall mean age was 62.32±13.88 years (range: 25 to 97 years). Histologically, the tumour was a squamous cell carcinoma in 81(89.01%) cases and a basal cell carcinomas in 10(10.99%) cases. Upon admission, the mean diameter of the tumour in squamous cell carcinoma patients was 2.03±1.23 cm and 1.87±1.29 cm in basal cell carcinoma patients. As for the tumour differentiation, 67(84.72%) of the squamous cell carcinoma cases were well differentiated, while 14(17.28%) were moderately differentiated.

Conclusion: The incidence of lip cancer was found to be higher among men, while the histopathological type was mostly squamous cell carcinoma and well differentiated.

Keywords: Epidemiology, Histopathology, Cancer, Lip, Retrospective. (JPMA 66: 1433; 2016)

Introduction

Lip cancers are frequent tumours of the head and neck region, accounting for approximately 25-65% of all oral cancers, and 10-12% of all cancers in the head and neck.^{1,2} Although a common malignancy, it seems more curable than cancers in other head and neck sites.²

Squamous cell carcinoma (SCC) is the leading cause of most lower lip cancers, accounting for more than 95% of lip cancers in all published case series.^{3,4} However, most malignant neoplasms of the upper lip are basal cell carcinomas (BCC).⁵ Excluding malignancies developing from the skin in close proximity to and extending to the lip, SCC stands out undoubtedly as the most common form of cancer in any portion of the lip. The combination of long-term exposure to ultraviolet (UV) radiation from exposure to sunlight and a fair skin has been proposed as one of the etiological factors in the epidemiology of lip cancer.⁶ The International Agency for Research on Cancer (IARC) report, however, states that: "Assessment of the carcinogenicity of solar radiation for the lip is complicated by the fact that carcinoma of the lip is actually diagnosed

as a mixture of cancers of the external lip and cancers of the buccal membranes."⁷

The current study was planned to review lip cancer patients with respect to age, gender, location and histological type of tumour, and risk factors.

Patients and Methods

This retrospective study was conducted at the Yuzuncu Yil University, Van, Turkey, and comprised medical records of the histologically confirmed lip cancer patients between 1994 and 2010. Approval was obtained from the institutional review board. Patients having neck nodes or evidence of distant metastasis were excluded. The patients were divided as SCC and BCC cases. The cases with SCC of the lips were also evaluated according to the differentiation of the tumour.

Age, gender, location and histological type of tumour, and risk factors were recorded for each patient.

Results

Of the 91 patients, 73(80.22%) were men and 18(19.78%) were women. The overall mean age was 62.32±13.88 years (range: 25 to 97 years). Histologically, the tumour was an SCC in 81(89.01%) cases and BCC in 10(10.99%) patients. SCC was diagnosed in the upper lip in 11(13.58%) patients, in the commissure in 3(3.7%) and in the lower lip in 67(82.71%). There were 7(70%) BCC cases in the upper and 3(30%) in the lower lip.

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Table-1: Age, time interval between the appearance of the tumour and admittance, and tumour diameter according to the histopathological type of the tumour.

	SCC (n=81) mean±SD (range)	SCC (n=10) mean±SD (range)
Age (years)	62.26±14.23 (25-97)	62.80±11.31 (44-74)
Time interval between the appearance of the tumour and admittance (months)	13.74±10.497 (1-48)	19.80±10.60 (6-36)
Tumour diameter (cm)	2.03±1.23 (0.4-5.0)	1.87±1.29 (0.7-4.0)

SCC: Squamous cell carcinoma

BCC: Basal cell carcinoma

SD: Standard deviation.

Table-2: Age, time interval between the appearance of the tumour and admittance, and tumour diameter according to the differentiation of the squamous cell carcinoma tumours.

	Good differentiated mean±SD (range)	Moderately differentiated mean±SD (range)
Age (years)	62.74±14.28 (25-97)	65.27±14.19 (35-81)
Time interval between the appearance of the tumour and admittance (months)	14.74±11.06 (1-48)	8.36±4.39 (1-12)
Tumour diameter (cm)	2.05±1.18 (0.4-5.0)	2.19±1.36 (0.5-4.5)

SD: Standard Deviation.

The mean age was 62.26±14.23 years for SCC cases and 62.80±11.31 years for BCC cases. The time interval between the appearance of the tumour and admittance to the clinic was 13.74±10.49 months (range: 1 to 48 months) for SCC cases and 19.80±10.60 months (range: 6 to 36 months) for BCC cases. Upon admission, the mean diameter of the tumour in SCC patients was 2.03±1.23 cm (range: 0.4 to 5.0 cm) while in BCC patients it was 1.87±1.29 cm (range: 0.7 to 4.0 cm) (Table-1).

As for the tumour differentiation, 67(84.72%) of the SCC cases were well differentiated, while 14(17.28%) were moderately differentiated. The mean age of the patients was 62.74±14.28 years for well differentiated SCC cases and 65.27±14.19 years for moderately differentiated SCC cases. The time interval between the appearance of the tumour and admission to the clinic was 14.74±11.06 months for well differentiated SCC cases while it was 8.36±4.39 months for moderately differentiated SCC cases. Upon admission, the mean diameter of the tumour in well differentiated SCC patients was 2.05±1.18 cm while in moderate differentiated SCC patients it was 2.19±1.36 cm (Table-2).

Discussion

In this retrospective study, a total of 91 lip cancer patients

were reviewed with respect to age, gender, histological findings and associated risk factors.

The majority of lip cancer cases is diagnosed in the lower lip, probably due to the higher solar radiation exposure of this area.¹ Higher incidence rates are found in Europe than in Asia in the male population.⁸ In the present study, there were 73(80.22%) men and 18(19.78%) women. Lip cancer patients are over 50 years of age in 75% of the cases in the literature.^{2,5} Therefore, lip cancer is accepted as a tumour of the elderly population that develops around the fifth to sixth decade.¹ However, as with this study, cases have been reported as early as the third decade of life. An increase in the number of younger people reporting this condition was observed in the later years of the study.⁹ In the present series, the mean age of the study group was 62.32±13.88 years.

Dimensions of lifestyle behaviours (risk factors like tobacco use and alcohol consumption) are known to have synergistic effects.¹⁰ These could be contributory factors in the higher incidence rates among men. This is not to say that women do not engage in these behavioural practices. The escalating rate of lip cancer in females is likely to be explained by the increased smoking of tobacco and alcohol consumption. When cumulative effects of smoking and alcohol consumption with other risk factors like sunlight and susceptibility are taken into consideration, men are likely to be at a higher risk.

Lip cancer is defined as a cancer that affects the red border and adjacent mucosa of the lip, excluding cancers on the skin of the lip. It usually appears on the lower lip with a histological pattern of SCC, while skin cancer is mainly BCC. However, although most skin cancers may be BCCs, the number of SCC non-melanoma skin cancers may be considerable and greater than the number of lip cancer per year. To minimise this bias, only cases with histopathological confirmation were included in the current study.

Contrary to previous reports, well differentiated (84.72%) SCCs account for the majority of patients; while moderately differentiated (15.28%) SCCs account for the rest of the study group. These results are contrary to a large series from Nigeria that reports 47.6% frequency for the poorly differentiated SCCs of the lip.¹¹

This may be attributed to several factors. Firstly, earlier detection of cancers in Western countries compared with developing countries allows treatment at an earlier stage of development.¹² Secondly, 58% of patients were under the age of 50 in a Nigerian study and these patients were significantly younger than those in our study. Finally,

different environmental factors that affect exposure to carcinogens may also play a role in carcinogenesis.¹³

Limitations of our study include the retrospective design and relatively small number of our series. In addition, some details of history and factors that may influence the outcome may not be completely documented. Due to these restrictions, associations should be interpreted with caution.

Conclusion

The incidence of lip cancer was found to be higher among men, while the histopathological type was mostly SCC and good differentiated.

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Conflict of Interest: None.

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