

Head and Neck Squamous Cell Carcinoma in a Tertiary Care Hospital

Nisar Akber Khan, Babar Rafiq Khan, Noor Fatima, Muhammad Ali Tirmizey, Muhammad Taqi, Muhammad Ihsan Ibrahim

Authors

- 1. Dr. Nisar Akber Khan**
Medical Officer, ENT
Allied Hospital, Faisalabad
- Dr. Babar Rafiq Khan**
Associate Professor, ENT
PMC / Allied Hospital, Faisalabad
- 2. Noor Fatima**
Medical Student
Punjab Medical College, Faisalabad
- 3. Prof. Dr. Muhammad Ali Tirmizey**
Professor and Head of ENT
PMC / Allied Hospital, Faisalabad
- 4. Dr. Muhammad Taqi**
APMO, ENT
Allied Hospital, Faisalabad
- 5. Dr. Muhammad Ihsan Ibrahim**
SMO, ENT
Allied Hospital, Faisalabad

Corresponding Author

Dr. Nisar Akber Khan
Medical Officer, ENT
Allied Hospital, Faisalabad
Contact: +92 332-6608543
Email: nisarakber@gmail.com

Submitted for Publication

04-07-2016

Accepted for Publication

23-08-2016

ABSTRACT

Background: Squamous cell carcinoma is the commonest head and neck malignancy which accounts for approximately 20% of the cancer burden in Asian countries. Frequencies and incidence rates of site specific head and neck squamous cell carcinoma have been reported regularly in different studies from various parts of the country. **Methods:** It was a descriptive study including 84 biopsy proven cases of squamous cell carcinoma from head and neck region reported to ENT unit-1 Allied Hospital Faisalabad by Pathology lab during January 2014 and December 2015. Data was acquired from hospital and pathology lab and analysed using SPSS version 18. **Inclusion Criteria:** Primary cases, mucosal disease. **Exclusion criteria:** congenital tumors, children, mentally retarded. **Objective:** The objective of the study was to identify the sites of cancer in head and neck along with their risk factors so that community education may be performed for better prevention of head and neck squamous cell carcinoma. **Results:** Mean age of the patients was 53.71 ± 14.3 (median: 55) years. Mean age of females was 51 ± 13.28 (median: 50) years. Mean age of male patients was 56 ± 15.1 (median: 55) years. 53% of patients belonged to rural areas (n=53). 37% (n=31) of patients came from urban areas. The commonest risk factor was smoking. The commonest site was hypo-pharynx. **Conclusions:** head and neck squamous cell carcinoma has a peak age incidence in 5th decade. Males and females are equally affected. Smoking is the commonest risk factor in Faisalabad. Most of the patients have moderately differentiated squamous cell carcinoma. Hypo-pharynx is the commonest site involved. **Keywords:** Head and neck squamous cell carcinoma, Males, Females, Smoking, Differentiation, Sites.

Article Citation: Usman U, Irfan M, Faisal M. Head and Neck Squamous Cell Carcinoma in a Tertiary Care Hospital. APMC 2016;10(4):203-205.

INTRODUCTION

HNC comprise soft tissue neoplasms of oral cavity including lips, nasal cavity and para-nasal sinuses (PNS), pharynx, larynx and salivary glands. More than 5% of all malignant tumors worldwide are head and neck cancer, with more than 100,000 cases diagnosed in Europe each year¹.

Head and neck cancers are grouped together with the justification of similar natural history, epidemiology, risk factors, morphology, and 3control measures². Squamous cell carcinoma is the commonest head and neck malignancy which accounts for approximately 20% of the cancer burden in Asian countries. In a study on incidence and survival trends of head and neck squamous cell carcinoma in the Netherlands, Braakhuis et al. has shown a 2-year survival rate of 72% for the patients had been diagnosed between 2007 and 2011³.

METHODOLOGY

Study design: It was a retrospective cross sectional descriptive study.

Sample size: All 84 biopsy proven cases of squamous cell carcinoma from head and neck region reported by Histopathology lab.

Period: January 2014 to December 2015 were included in the study.

Data about age, gender, history of tobacco smoking, histological diagnosis was acquired from hospital and lab records. Data was entered and analysed using SPSS version 18. Means were calculated for quantitative and percentages were drawn for qualitative variables.

RESULTS

Mean age of the patients was 53.71 ± 14.3 (median: 55) years. Mean age of male patients was 56 ± 15.1 (median: 55) years. Females were affected at slightly younger age. Mean age of females was 51 ± 13.28 (median: 50) years. 53% of patients belonged to rural areas (n=53). 37% (n=31) of patients came from urban areas. History of smoking was present in 47 (56%) cases. 21 (25%) cases were suffering from severe iron deficiency anemia. 6 (7%) cases were alcoholics. 4 patients (5%) had positive history of paan chewing. No apparent cause could be identified in 6 (7%) cases. Incidence of females was more in rural area patients perhaps due of poor nutritional status and anemia.

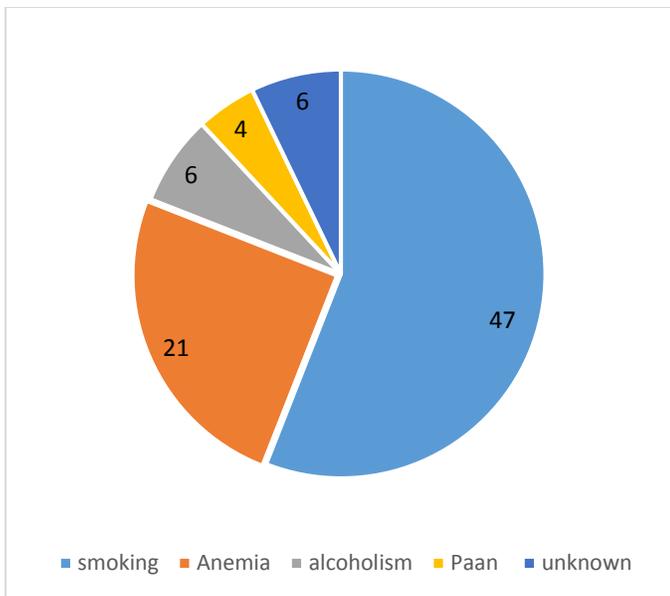


Figure 1: Risk factors

Histopathology revealed moderately differentiated squamous cell carcinoma in 46 (55%) patients while well differentiated and poorly differentiated histopathology was received in 20 & 18 patients respectively. The commonest site for squamous cell carcinoma in this study is hypo-pharynx, larynx being the second commonest site.

Table 1: Degree of differentiation of HNSCC

| Degree of Differentiation | No. of Patients | % age |
|---------------------------|-----------------|-------|
| Well Differentiated | 20 | 24 % |
| Moderately Differentiated | 46 | 55 % |
| Poorly Differentiated | 18 | 21 % |

Hypo-pharynx is the commonest site involving 40 % of patients followed by tumors of larynx that constitute 33 %. Tumors of mastoid were the least common as shown.

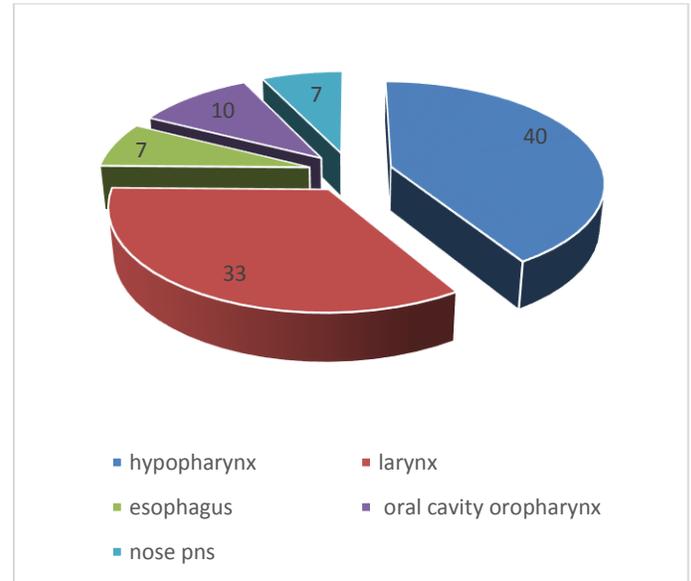


Figure 2: Percentage sites of HNSCC

DISCUSSION

Head and neck malignancies are common in several regions of the world where tobacco use and alcohol consumption is high. Pakistan falls into a high risk head and neck cancer geographical zone, presentation is late and treatment is not optimum⁴. In our study the male to female ratio is 1:1. The male to female ratio of head and neck cancer in Nairobi was found to be 2:1⁵. In another study the ratio was 2:1 to 4:1⁶. In our study women presented at a younger age and the commonest risk factors among them was iron deficiency anemia. This finding is consistent with other studies. There are more women and fewer smokers in the younger patient group⁷. In this study hypo-pharynx is the most commonly involved site (40%). Siddiqui and colleagues found that in Indian state of Bihar hypo-pharynx carcinoma was the third most common cancer⁸. In our study larynx is the second commonest site (33%) but Aziz et al. from within the country showed larynx as the most frequent site of head and neck cancer⁹. Larynx was the commonest site in a study in Bahawalpur¹⁰. In our study oral cavity and Oro-pharyngeal tumors are constitute 10 % of head and neck malignancies but in a study in Africa oral tumors were present in 90% of patients. The difference was because of increased use of oral tobacco and nuts there¹¹.

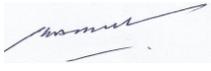
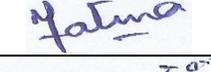
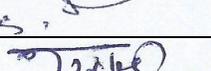
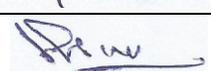
CONCLUSION

Head and neck squamous cell carcinoma affects patients at an older age. The commonest risk factor is tobacco use. Most of the patient's histopathology comes out to be moderately differentiated squamous cell carcinoma. The commonest site involved is hypo-pharynx.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

| Name of Author | Contribution to the paper | Author's Signatures |
|---------------------------------|---|---|
| Dr. Nisar Akber Khan | Study design, data collection and processing, data interpretation and result, final paper writing |  |
| Dr. Babar Rafiq Khan | Study design, data collection and processing, data interpretation and result, final paper writing |  |
| Noor Fatima | Data collection and interpretation, final paper writing |  |
| Prof. Dr. Muhammad Ali Tirmizey | Supervise the study |  |
| Dr. Muhammad Taqi | Data collection and interpretation |  |
| Dr. Muhammad Ihsan Ibrahim | Data collection and interpretation |  |