



Comparison of Oral Cavity and Oropharynx Cancer Patients Presentation at Regional Cancer Center: An Observational Study

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Abstract

Introduction: The higher prevalence of oral cavity cancer among males in India is attributed to the habit of tobacco chewing. In many states of India, there is addiction of Tobacco chewing in form of Zarda and Betel Quid placed under the tongue or at gingiva, which causes ulceration/lesion of underlying tissue. Tobacco chewing and smoking has synergistic effects to cause head and neck malignancy especially oral cavity and oropharynx. Oral cavity lesions are visible to the patients and oropharynx disease presentation is symptom based. Due to lack of awareness among tobacco chewers and smokers in rural as well as urban population, most of the patients present to hospital with heavy burden of disease.

Material and Method: This is a retrospective observational study conducted in regional cancer center Acharya Tulsi Regional cancer Treatment and Research Institute (ATRCTRI), Bikaner. A total of 88 patients were enrolled in this study to observe the pattern of disease. All patients who had proven malignancy in oral cavity and oropharynx were registered in Department of Radiotherapy. All patients after diagnostic and metastatic work up were staged according to TNM classification.

Results: Mean age of the patients in this study was 55.6 years. Male to female ratio was 2.67:1. Oral cavity patients were 42 (47.7%) and oropharynx patients were 46 (52.3%). In present study, SCC histopathology was seen in 62 (70.5%) patients and Adenocarcinoma histopathology in 26 (29.5%) patients. In oral cavity, stage I 6 (14.3%) patients, stage II 9 (21.4%) patients, stage III 11 (26.2%) patients and stage IV 16 (38.1%) patients respectively. Out of stage IV 16 patients, 9 (21.4%) patients were IVa and 7 (16.7%) patients were IVb.

In oropharynx, stage I 3 (6.5%) patients, stage II 7 (15.2%) patients, stage III 16 (34.8%) patients and stage IV 20 (43.5%) patients respectively. Out of stage IV 20 patients, 12 (26.1%) patients were IVa and 8 (17.4%) patients were IVb.

Discussion: Head and neck malignancy is the most common malignancy in India among males. This scenario is totally different from rest of the world, where the prevalence of lip and oral cavity cancer was not among the five most common malignancy¹. This is because of the habit of tobacco chewing, smokeless tobacco in India. Pan, gutkha, zarda are considered as smokeless tobacco,

which is generally placed under the tongue or near the gingiva buccal sulcus. It starts the process of chronic inflammation leading to ulceration. In India, among the users of smokeless tobacco, due to lack of awareness, most of the patients present at advanced stage. Besides the oral cavity lesions are visible to patients. In oropharynx part, patients presented to hospital when the symptoms become more aggressive.

Conclusion: Oral cavity cancer patients present earlier as compared to oropharynx tumor patients. This is because the oral cavity lesions are visible to patients and easy to locate but presentation of oropharynx tumors is symptoms based. When tumor shows its symptoms, at that time it can be recognized by the patient. Furthermore, among Indian rural population, due to lack of awareness, even oral cavity patients present at a later stage.

Keywords: Oral Cavity; Oropharynx; Symptoms; Stage

Introduction

Head and neck malignancies comprise many components like oral cavity, nasopharynx, oropharynx, hypopharynx. So these are heterogeneous in nature. According to GLOBOCON 2020, Head and neck malignancies are not amongst the five most common malignancies worldwide. The most common malignancy overall is the breast carcinoma which accounts for 11.7% of total cancer burden. Among males, the lung cancer is the most common malignancy and accounts for 14.3% cases. But Indian scenario is totally different from global cancer burden. In India, breast cancer is the most common malignancy overall and accounts for 13.5% of total cancer burden followed by lip and oral cavity (10.3%). Whereas, among males, lip and oral cavity cancer was the most common malignancy (16.2%) followed by lung cancer (8%) [1]. The higher prevalence of oral cavity cancer among males is attributed to the habit of tobacco chewing. In many states of India, there is addiction of Tobacco chewing in form of Zarda and Betel Quid placed under the tongue or near the gingiva, which causes ulceration/lesion of underlying tissue. Smoking is also a main cause of cancer. Tobacco chewing and smoking has synergistic effects to cause head and neck malignancy especially oral cavity and oropharynx. Oral cavity lesions are visible to the patients and oropharynx disease presentation is symptom based. Due to lack of awareness among tobacco chewers and smokers in rural as well as urban population, most of the patients present to hospital with heavy burden of disease. Oral cavity and oropharynx malignancies are staged according to TNM stage classification [2].

The present study is an observational study with an aim to observe the pattern of presentation in patients of oral cavity and oropharynx carcinoma.

Materials and Methods

This is a retrospective observational study conducted in regional cancer center ATRCTRI, Bikaner. A total of 88 patients were enrolled in this study to observe the pattern of disease. All patients who had proven malignancy in oral cavity and oropharynx were registered in Department of Radiotherapy, Acharya Tulsi Regional Cancer Treatment and Research Institute, Bikaner. All patients after diagnostic and metastatic work up were staged according to TNM classification.

Aims and Objectives

The present study is aimed to identify the stage at the time of presentation according to site (i.e. oral cavity and oropharynx) and presenting symptoms.

Method of study

All biopsy proven patients were grouped according to TNM classification of oral cavity and oropharynx.

Results

Age and gender

Mean age of the patients in this study was 55.6 years. Most of the patients were in 40-60 years of age group. Males were more affected than females. Male to female ratio was 2.67:1.

Symptoms

In the present study, the symptoms of Oral cavity lesions were non healing ulcer in 9 (21.4%) patients, large growth present in oral cavity in 6 (14.3%) patients, whereas a large number of patients, 27 (64.3%) presented with heavy tumor burden with tumor growth and nodal metastasis.

Oropharynx symptoms were dysphagia in 7 (15.2%) patients, odynophagia in 3 (6.5%) patients and huge tumor burden with tumor growth and nodal metastasis seen in 36 (78.3%) patients.

Diagnosis

On basis of presenting symptoms, patients were diagnosed as carcinoma oral cavity and oropharynx. Oral cavity patients were 42 (47.7%) and oropharynx patients were 46 (52.3%).

Squamous cell carcinoma (SCC) is the most common histology in head and neck malignancies. In present study, SCC histopathology was seen in 62 (70.5%) patients and Adenocarcinoma histopathology in 26 (29.5%) patients.

T stage

- In oral cavity, according to TNM, T₁ 13 (31%), T₂ 9 (21.4%), T₃ 8 (19%) and T₄ 12 (28.6%).
- In oropharynx, T₁ 7 (15.2%), T₂ 8 (17.4%), T₃ 12 (26.1%) and T₄ 19 (41.3%) respectively.

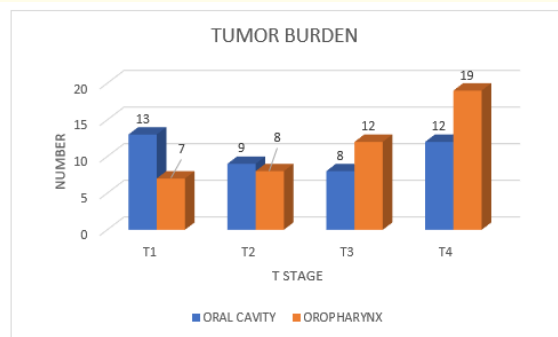


Figure 1

N stage

In oral cavity, N₀ 15 (35.7%), N₁ 11 (26.2%), N₂ 7 (16.7%), N₃ 9 (21.4%). In oropharynx, N₀ 10 (21.7%), N₁ 7 (15.2%), N₂ 11 (23.9%) and N₃ 18 (39.2%) respectively.

Overall stage

In oral cavity, stage I 6 (14.3%), stage II 9 (21.4%), stage III 11 (26.2%) and stage IV 16 (38.1%) respectively. Out of stage IV 16 patients, 9 (21.4%) patients were IV a and 7 (16.7%) were IV b.

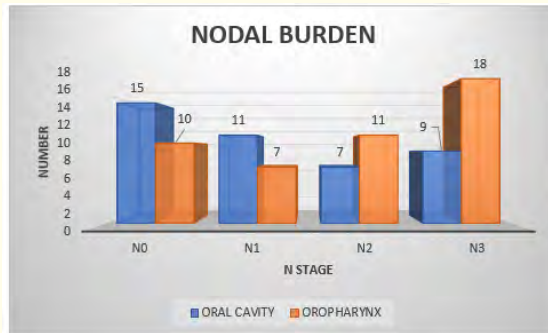


Figure 2

In oropharynx, stage I 3 (6.5%), stage II 7 (15.2%), stage III 16 (34.8%) and stage IV 20 (43.5%) respectively. Out of stage IV 20 patients, 12 (26.1%) patients were IV a and 8 (17.4%) patients were IV b.



Figure 3

Discussion

Head and neck malignancy is the most common malignancy in India among males. Lip and oral cavity is main site in head and neck malignancies. This scenario is totally different from rest of the world, where the prevalence of lip and oral cavity cancer was not among the five most common malignancy [1]. This is because of the habit of tobacco chewing, smokeless tobacco in India. Pan, gutkha, zarda are considered as smokeless tobacco, which is generally placed under the tongue or near the gingiva buccal sulcus. It starts the process of chronic inflammation leading to ulceration. This correlation was observed in a study which suggested the association of smokeless tobacco and oral cancer [3].

In rural population of India, males use gutkha, zarda in addition to addiction of bidi smoking. This has the synergistic effect to cause cancer in males. In some parts of rural population, females also smoke bidi and use gutkha. A study also confirmed that tobacco chewing and hpv has correlation with oral cancer and sub mucous fibrosis [4].

Mean age in the present study was 55.6 years and male to female ratio was 2.67:1. These results were well co related with study in which mean age was 56.49 years and male to female ratio was 2.28:1 [5].

In the present study, presenting symptoms in oral cavity malignancy were non healing ulcer, nodal metastasis and both tumor growth in addition to nodal metastasis. In oropharynx malignancy presenting symptoms were dysphagia, odynophagia and dysphagia or odynophagia with nodal metastasis.

Oral cavity malignancies include buccal mucosa, gingivo buccal sulcus, lip and tongue. Oropharynx includes base of tongue, tonsils, vallecula and epiglottis. Cancer distribution among these sites confirmed with another study which showed that use of tobacco leads to oral and oropharynx carcinoma [6].

In India, among the users of smokeless tobacco, due to lack of awareness, most of the patients present at advanced stage. Besides the oral cavity lesions are visible to patients. In oropharynx part, patients presented to hospital when the symptoms become more aggressive. In the present study, more number of patients presented at early stage in oral cavity carcinoma patients than oropharynx carcinoma patients, where as majority of patients presented at an advanced stage. These results were co related with another study which concluded that a low proportion of non-metastatic head and neck cancer patients presented in the early stages. A vast majority of the patients presented with stages IVA and IVB. Not only does this reflect a poor therapeutic outlook, but also exposes the dire need for programmes focusing on cancer awareness and early detection in the region [7].

Conclusion

Oral cavity cancer patients present earlier as compared to oropharynx tumor patients. This is because the oral cavity lesions are visible to patients and easy to locate but presentation of oropharynx tumors is symptoms based. When tumor shows

its symptoms, at that time it can be recognized by the patient. Furthermore, among Indian rural population, due to lack of awareness, even oral cavity patients present at a later stage.

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