



ORAL CAVITY AND OROPHARYNGEAL MALIGNANCIES: A CLINICO-PATHOLOGICAL STUDY

Dr. Lidiya James

Junior Resident Department of ENT Government Medical College, Thrissur, Kerala.

Dr. Ajaykumar K Francis *

Associate Professor Department of ENT Government Medical College, Thrissur-680596, Kerala. *Corresponding Author

ABSTRACT

BACKGROUND: Oral cavity and oropharyngeal malignancies are a heterogeneous group of cancers arising from different parts of the oral cavity and oropharynx, with different predisposing factors, prevalence, and treatment outcomes. It is the sixth most common cancer reported globally. In India it accounts for majority of cancer mortality and morbidity, posing a significant challenge to health care providers by both preventive and diagnostic means.

AIM: To evaluate the clinico-epidemiological profile of oral cavity and oropharyngeal malignancies and to study the histopathological type and differentiation of oral cavity and oropharyngeal malignancies.

MATERIALS AND METHODS: This study was conducted in department of Otorhinolaryngology, Government Medical College, Thrissur, for a period of one year from January 2016 to January 2017. It was a cross sectional study. 100 patients with complaints of growth in oral cavity and oropharynx were selected using convenient sampling technique. Detailed history is recorded in a proforma, regarding age, sex, presenting complaints, habits of chewing tobacco, habit of smoking and consumption of alcohol. Thorough examination of oral cavity and oropharynx is performed, and site and morphology of growth is noted. Biopsy is taken from the growth and specimen sent for histopathological examination. Histopathological diagnosis regarding type and differentiation is made.

RESULTS: 100 patients with complaints of growth in the oral cavity and oropharynx were studied. Majority of patients were males [75%]. Maximum number of cases presented between 50 and 59 years of age (mean age: 60.85 years). Majority of patients were daily wage workers doing manual labour [47%]. 73% of patients were smokers, 52% were consumers of smokeless tobacco, while 73% were alcoholics. Oral lesion was the most common symptom in our study. Tongue was the commonest site [34%] followed by buccal mucosa [18%]. Squamous cell carcinoma was the commonest histological variety [96%]. Majority of the tumours were well differentiated. **CONCLUSION:** Malignancy of oral cavity and oropharynx is predominantly a disease of males and affects older age group. Manual labourers and people with poor socio-economic background are more vulnerable to oral and oropharyngeal malignancies. Tobacco and alcohol consumption are important etiological factors for oral and oropharyngeal malignancies. Anterior part of oral cavity is commonly affected, and patients usually presents with oral lesion. Well differentiated squamous cell carcinoma is the commonest histological variety.

KEYWORDS : Clinico-pathological study, Oral cavity malignancy, Oropharyngeal malignancy, Squamous cell carcinoma.

INTRODUCTION

Oral cavity and oropharyngeal squamous cell carcinoma are the 6th most common malignancy in western world. It accounts for more than 40% cancers in India¹. Males are more commonly affected than females, usually in 5th to 6th decade of life. Oral cancers are also increasing in younger population due to the habit of consuming alcohol and tobacco. Anatomically, the anterior portion of the oral cavity is commonly involved. This is possibly due to the longer duration of contact with the carcinogens in tobacco and alcohol². Early diagnosis of most of these cancers have a very good prognosis. However, a delay in diagnosis and intervention impairs the patient's quality of life. Studies have reported an alarming lack of awareness about oral cavity and oropharyngeal cancer, its symptoms and causes. These gaps in knowledge need to be addressed by further public education, possibly targeted at high-risk groups. With the knowledge of risk factors, primary prevention through the elimination of tobacco consumption and reduction of alcohol intake is urgently needed³.

The purpose of the study is to determine the distribution of oral cavity and oropharyngeal malignancies in relation to age, sex, site, personal habits, histopathological type and differentiation.

AIM OF STUDY:

To evaluate the clinico-epidemiological profile of oral cavity and oropharyngeal malignancies and to study the histopathological type and differentiation of oral cavity and oropharyngeal malignancies.

MATERIALS AND METHODS:

This cross-sectional study was conducted in the department of ENT, Government Medical College, Thrissur, for a period of one year from January 2016 to January 2017. Prior to commencement, the study was approved by the ethical committee of the medical college.

Hundred patients with growth in oral cavity and oropharynx, undergoing biopsy or surgical treatment were included in the study. Metastatic lesions to the oral cavity and oropharynx from primary malignancy elsewhere in the body and recurrence after treatment of primary oral cavity and oropharyngeal malignancy were excluded from the study.

All the patients fulfilling the selection criteria were explained about the purpose of study and a written consent was obtained from them to participate in the study before enrolment. Patients with complaints of growth in oral cavity and oropharynx are selected using convenient sampling technique. Detailed history is recorded in a proforma, regarding age, sex, presenting complaints, habits of chewing tobacco, habit of smoking and consumption of alcohol. Thorough examination of oral cavity and oropharynx is performed, and site and morphology of growth is noted. Biopsy is taken from the growth and specimen sent for histopathological examination. Histopathological diagnosis regarding type and differentiation is made.

OBSERVATION AND RESULTS:

Regarding the age group among 100 patients studied, maximum number of patients were in the age range of 50-59 (29%), followed by 60-69 (27%) and 70-79 (24%). 3% patients were between 30-39 years, 12% patients between 40-49. There was only one patient below 30 years. Four patients were above 80 years old. Mean age was 60.85.

In our study majority (75%) of the patients were males. Only 25% were females. Among 100 patients, 83 were below the poverty line. Only 17 patients were above the poverty line. Majority of patients [47%] were daily wage workers doing manual labour. 8% patients were farmers, all the females were home makers (25%) and others 20%. Regarding the habits among the 100 patients in our study, 73%

gave history of smoking. 52% were pan chewers. 25% were both smoking and chewing tobacco. 73% were consuming alcohol. Among 25 female patients all were having the habit of chewing tobacco. Chewing was the only habit found in female patients in our study. The most common symptom in our study was oral growth [81%]. Other complaints were oral ulcer [79%], odynophagia [69%], dysphagia [33%], neck swelling [54%], tooth loosening [15%].

In our study, the commonest site of oral cavity and oropharyngeal malignancy was oral tongue [34%] followed by buccal mucosa [18%]. Most common site involved in oropharynx was tonsil and its pillars [8%].

Regarding the histopathological types, Squamous cell carcinoma was the commonest type of oral cavity and oropharyngeal malignancy [96%]. Verrucous carcinoma was seen in 4%. Well differentiated type was the majority with 58%, followed by moderately differentiated in 34% and poorly differentiated in 4%.

DISCUSSION:

Oral cavity and oropharyngeal malignancies are one of the most common forms of cancer in India and is of significant public health importance to India. Due to increased incidence and prevalence of these malignancies, a large number of studies have been conducted worldwide.

This study was done in the department of Otorhinolaryngology, Govt. Medical college, Thrissur for a period of 1 year and included 100 patients. Results of this study is compared with similar studies conducted in other places.

In our study majority (75%) of the patients were males. Only 25% were females. Male to female ratio was 3:1. In a study by Patel *et al*⁷ 75% of patients were males. Mehrotra *et al*⁸ from Allahabad, India reported a male: female ratio of 3.27:1. Iypeet *et al*⁹ from Trivandrum, Kerala found males 70% compared to females 30%. Dhar *et al*¹⁰, in their study reported that 68.3% of patients were males.

Maximum number of patients were in the age range of 50-59 (29%), followed by 60-69 (27%) and 70-79 (24%). There was only one patient below 30 years. Four patients were above 80 years old. Mean age was 60.85. Patel *et al*⁷ reported 12.9% of oral and oropharyngeal malignancies below 35 years age, 23.8% between 35 and 45, and 63.3% cases over 45 years of age. In a study by Mehrotra *et al*⁸, the maximum incidence was in 50-59 years age range. Iypeet *et al*⁹ found 2.8% of oral cancer in young patients below 35 years of age. Dhar *et al*¹⁰ reported maximum incidence (35.7%) in the age range of 51-60 years.

In our study majority of patients [47%] were daily wage workers doing manual labour. Eight [8%] patients were farmers, all the 25 female patients (25%) were home makers, other occupations include 20 [20%].

Richard *et al*¹¹ found that a larger proportion of cases were manual labourers (84%). Balaramet *et al*¹² observed that industrial manual workers and farmers were at an approximately 2-fold increased risk of oral cancer compared with clerical workers.

In our study majority of patients were below the poverty line which consists of 83% of study group. 17% of patients were above the poverty line. Khandekaret *et al*¹³, in a hospital-based study reported highest incidence of oral malignancy in lower middle and upper lower socio-economic scale. Balaramet *et al*¹² have shown similar findings in their study among cases of oral cancer in southern India.

The most common symptom in our study was oral lesion. 81% of the patients presented with the complaint of an oral lesion. Other complaints were oral ulcer [79%], odynophagia [69%], dysphagia [33%], neck swelling [54%], tooth loosening [15%]. Durazzo *et al*¹⁴ from Brazil also found oral lesion to be the commonest presenting symptom in their study (88%).

In our study, the commonest site of oral cavity and oropharyngeal malignancy was oral tongue [34%] followed by buccal mucosa [18%]. Tonsil and pillars 8%, alveolus 8%, floor of mouth 7%, soft palate 5%, retromolar trigone 5%, base of tongue 5%, uvula 3%, hard palate 3%, gingivobuccal sulcus 2%, vallecula 1%, lip 1% were other sites involved. Most common site involved in oropharynx was tonsil and its pillars [8%]. In the study by Patel and Pandya⁴, conducted at Surat, Gujarat, Anterior 2/3 of the tongue was the commonest site (23.02%). Next common was posterior 1/3 (19.64%), followed by alveolus, lips and cheeks. Mehrotra *et al*⁸ in their study found tongue to be the commonest site (42.57%) followed by cheek in 19.14%. Iypeet *et al*⁹ found tongue the commonest site (52%) followed by cheek (26%), alveolus (10%), palate (4.5%), lip (2.3%) and floor of mouth (1.9%). In a study done by Bhattacharjeet *et al*¹² oropharyngeal cancer was the commonest site comprising 15.56% of total body malignancy and oral cavity comprising 8.87%. Tongue was the commonest site of malignancy in oral cavity accounting for 32.67% of oral cavity malignancy. Ahluwalia *et al*¹³ from Allahabad found a major share (55.6%) of carcinoma Cheek among lesions of oral cavity.

In our study, 96% of cases had Squamous cell carcinoma. 4% were verrucous carcinoma. Durazzo *et al*¹⁴ from Brazil also found squamous cell carcinoma was the most frequent histological type and was present in 90.3% of patients included in their study.

Wahidet *et al*¹⁵ from Pakistan found squamous cell carcinoma in 94% and adenocarcinoma, acinic cell carcinoma and malignant melanoma in 2% each. Khandekaret *et al*¹³ in a hospital-based study at Nagpur found squamous cell carcinoma of varied differentiation in 72.5% cases and Verrucous carcinoma in 27.5% cases.

In our study 58 [60.42%] of tumours were well differentiated. 34 [35.42%] were moderately differentiated and 4 [4.7%] were poorly differentiated.

In the study by Patel⁷, 60.12% of the tumours were well differentiated, 38.7% were moderately differentiated and 1.18% were poorly differentiated. Mehrotra *et al*⁸ also observed maximum number of well differentiated Squamous cell carcinoma. Iypeet *et al*⁹ found well differentiated squamous cell carcinoma in 52.6% cases, moderately differentiated in 34.2% and poorly differentiated in 8.9% of cases.

CONCLUSION

Malignancy of the oral cavity and oropharynx is predominantly a disease of males. It usually affects older age group. Manual labourers and people with poor socioeconomic background are more vulnerable to oral and oropharyngeal malignancy. Tobacco and alcohol consumption are important etiological factors for oral and oropharyngeal malignancy. Presence of oral lesion is the commonest symptom.

Tongue was the commonest site involved, followed by buccal mucosa. Squamous cell carcinoma was the commonest histological variety. Majority of oral and oropharyngeal malignancy were well differentiated squamous cell carcinoma.

REFERENCES

1. Michael Gleeson., George G Browning., Martin J Burton., Ray Clarke., Hibbert John., Nicholas S Jones., Valerie J Lund., Linda M Luxon and John, C. 2008. Watkinson Scott-Brown's Otorhinolaryngol. Head and Neck Surgery, 7th edn.: 1791-2371.
2. Shubha P Bhat., Vadisha Bhat., Harish Permi., Jayaprakash Shetty, K., Rajeshwari Aroor and Sateesh Kumar Bhandary, B. 2016. Oral and oropharyngeal malignancy: A clinicopathological study. Internet J. path. Laboratory Medicine. 2(1): OA3
3. Warnakulasuriya, S. 2009. Global epidemiology of oral and oropharyngeal cancer. Oral oncology. 45: 309-316
4. Patel, M. M and Pandya, AN. 2004. Relationship of oral cancer with age, sex, site distribution and habits. Indian J. Pathol Microbiol. 47(2): 195-197
5. Mehrotra, R., Singh, M., Kumar, D., Pandey, A. N., Gupta, R and Sinha, U.S. 2003. Age specific incidence rate and pathological spectrum of oral cancer in Allahabad. Indian J Med Sci; 57 (9): 400-4
6. Iype, E.M., Pandey, M., Mathew, A, Thomas, G., Sebastian, P and Nair, M.K. 2001. Oral cancer among patients under the age of 35 years. J postgrad Med. 47(3): 171-6
7. Dhar, P.K., Rao, T.M and Nair, N.S. 2000. Identification of risk factors for specific subsites within the oral and oropharyngeal region- a study of 647 cancer patients. Indian J cancer, June-Sept: 37: 114-122

8. Richard, M., Kunnambath, R and Risto, S. 2008. Role of tobacco smoking, chewing and alcohol drinking in the risk of oral cancer in Trivandrum, India: A nested case-control design using incident cancer cases. *Oral oncology*; 44:446-454
9. Balaram, P., Sridhar, H., Rajkumar, T., Vaccarella, S., Herrero, R and Nandakumar, A. 2002. Oral cancer in southern India: the influence of smoking, drinking, pan chewing and oral hygiene. *International Journal of Cancer*. 98(3):440-445
10. Khandekar, S.P., Bagdey, P.S and Tiwari, R.R. 2006. Oral cancer and some epidemiological factors: a hospital-based study. *Indian Journal of Community Medicine*. Vol 31 (3)
11. Durazzo, M.D., Araujo, CEN, Brandao Neto, J.S, Potenza, A.S and Costa, P. 2005. Clinical and epidemiological features of oral cancer in a medical school teaching hospital from 1994 to 2002: increasing incidence in women, predominance of advanced local disease, and low incidence of neck metastases. *Clinics*. 60(4):293-8
12. Bhattacharjee, A., Chakraborty, A and Purkaystha, P. 2006. Prevalence of head and neck cancers in North East – An institutional study. *Indian J Otolaryngol. Head Neck Surg*:58(1):15-19.
13. Ahluwalia, H., Gupta, S.C., Singh, M., Mishra, V., Singh, P.A and Walia, D.K. 2001. Spectrum of Head and Neck Malignancies in Allahabad. *Indian Journal of Otolaryngology and Head and Neck Surgery*, January – March: 53(1):16-21
14. Wahid, A., Ahmad, S and Sajjad, M. 2005. Pattern of carcinoma of oral cavity reporting at dental department of Ayub Medical college. *Journal of Ayub Medical College*. 17(1):Jan-March