



## CLINICOPATHOLOGICAL PROFILE OF EARLY TUMOURS OF OROPHARYNX

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### ABSTRACT

**Introduction:** Head and neck squamous cell carcinoma (SCC) is a disease of older age group predominately in the sixth and eighth decades of life. There has been increasing trend in younger age group worldwide as well as in India as reported by many studies. **Aims:** To study the clinico-pathological profile of early tumours of oropharynx. **Methodology:** This study was conducted in patients of T1 & T2 oropharynx tumours admitted in ENT ward of PGIMER, Chandigarh. **Results:** 42 patients were enrolled for the study. The most frequent site of primary tumor was tonsil > base of tongue.

**KEYWORDS :** Oropharynx tumors, profile, clinic-pathological

### INTRODUCTION:

Cancers of head and neck account for around 30-40% of all cancers and it is a major leading cause of mortality[1]. The incidence of oropharyngeal cancer is increasing, particularly in young patients due to the increased risk of human papilloma virus as an emerging risk factor in the young patients[2].

In the Indian subcontinent, one of the top three types of cancer is oral cancer.[3] Oral cancer is in approximately 30% of all cancers in India. Oral squamous cell carcinoma (SCC) is more common in men between the sixth and eighth decades of life,[4]. In India the prevalence varies from 22.8% in north[5] and 44% in south[6] and in young age the incidence of oral SCC varies between 0.4% and 6.6%.[4]

Like other head and neck cancers in our environment, patients present late[6] and the tumors can be difficult to assess clinically because of metastasis in three ways i.e. local (by continuity and contiguity), lymphatic and hematogenous spread.

The anatomy of the oropharynx is complex with many vital structures located nearby [7]. It extends from the level of the hard palate superiorly to the level of the hyoid bone inferiorly. It is bounded anteriorly by the anterior faucal pillars which are contiguous with the retromolar trigone. For purposes of tumor classification, the oropharynx is divided into the roof, anterior, lateral and posterior walls [8].

Alcohol and tobacco are the most significant etiological factors playing a synergistic effect [9]. Other etiologic factors are betel-nut chewing, ionizing radiation, iron deficiency anemia, dental sepsis, submucosal fibrosis of the palatine arch and Human Papilloma Virus (HPV) types 8 and 16 [10,11]. With or without the risk factors of tobacco and alcohol, oral HPV infection is known to be strongly associated with oropharyngeal cancers [12].

**Methodology:** This prospective study was conducted on 42 patients of T1 & T2 tumours of the oropharynx at the Department of Otolaryngology and Head and Neck surgery, PGIMER, Chandigarh.

All patients were preoperatively worked up with detailed history, clinical examination, CT scan and MRI to assess the extent of tumour, FNAC, X-ray chest, blood tests and biopsy of the lesion. The excised lesion was sent for histopathological examination.

### RESULTS:

**Table 1: Socio-demographic profile of enrolled patients**

Demographic variable	Frequency	Percentage
Age (Mean±SD)	53.16±11.49	
Gender	Male	38
	Female	4
Addictions	Smoker+alcoholic	24
	Smoker	10
	Non-smoker	5
	Tobacco chewing	1
	Alcoholic	1
	Tobacco chewing+alcoholic	1

**Table 2: Tumour characteristics in terms of site and staging**

Tumour characteristics	Frequency	Percentage
Tumour sub site	Tonsil	30
	Base of tongue	8
	Soft palate	4
T stage	T1	10
	T2	32
Lymph node staging	N0	27
	N1	2
	N2b	11
	N3	2
TNM Stage	I	7
	II	20
	III	2
	IV	13
HPV Status (n=23)	Positive	2
	Negative	21

Tumor samples were subjected to PCR for presence of HPV (p16 genome) infection in 23 patients. HPV was detected in 2 patients (8.7%). Both the patients who were positive for HPV infection are less than 45 years of age and had no history of smoking .HPV positivity could not be done in all patients due to logistics reasons.

### DISCUSSION:

Worldwide, oral cancer is estimated to be the sixth most common cancer, prevalence being highest in India.[5] Understanding the epidemiology and the risk factors for oral cancers can help early identification and prompt treatment of patients with oral cancers. Early diagnosis of oral cancer is important as it leads to early institution of therapy that translates in a better prognosis. Late detection and diagnosis is directly proportional to increased morbidity and mortality.

In our study there were 38 (90.5%) males and 4 (9.5%) females. Men outnumbered women which is in line with the study by Patel MM[15]. Males are more commonly affected compared to females by OSCC in both developed (male: female ratio 2.5:1) and developing (male: female ratio 3:1) countries, which may be due to easy acceptance of habits by males.[14]

The age of patients ranged from 28 to 78 years with a mean age of 53.16±11.49 years. Similarly, Tandon A [15] et al observed the age of the patients ranging from 24 to 90 years mean (± SD) 52.29 ± 13.37 years.

Oral cancer is usually a disease that occurs in males after the fifth decade of life. The mean age of presentation is in the fifth and sixth decade of life in Asian populations.[16] However, a steady increase in the incidence of OSCC has been observed in patients younger than 40 years[17]. In the present study, OSCC was diagnosed in 15% of male patients younger than 40 years.

Tobacco consumption is a major risk factor for oral and oropharyngeal SCC.[18] There is a strong association between the use of smokeless

tobacco and the risk of development of OSCC.[19] Distinct cultural practices such as betel-quid chewing as well as varying patterns of the use of tobacco and alcohol are prevalent in Asian countries, which are important risk factors that cause oral cancer.[20]

Majority of our patients had history of addictions with smoking tobacco with alcohol consumption being most common. These findings are consistent with the conclusions by Rosenquist K[21], who showed that smoking tobacco and alcohol consumption are risk factors for oropharyngeal carcinoma.

In the present study, most of the patients (82.57%) had  $\geq 5$  years of tobacco and/or betel-quid chewing habit. Daily frequency and duration of tobacco and/or alcohol consumption have a direct relationship to oral cancer development.[20,22]

Most common oropharyngeal subsite involved by the primary tumor was tonsil (71.4%) followed by base of tongue (19.0%) and soft palate(9.5%). Similarly, David Stepnick[23] also showed that tonsillar fossa is the most common site in oropharyngeal squamous cell carcinoma.

Majority of the patients in our study were of T2 (76.2%) followed by stage T1 (23.8%). Shenoi R in their study observed that majority of patients, i.e., 243 (82.37%) presented in Stage III, 34 patients (11.53%) presented in Stage II and 18 patients (6.1%) in Stage IV. None of the patients had presented in Stage I. This reflects the late presentation of cases in Indian population due to lack of awareness and illiteracy.

### CONCLUSION:

This study confirms previously established demographic factors such as age, gender, and site distribution for OSCCs in north Indian patients. There are significant associations between OSCC and middle-aged group participants predominantly male. The burden of oral cancer has been increasing in most Asian countries, especially in India; hence, increasing national level public awareness programs all over the country is a demand of the time for prevention, early detection and diagnosis, and to support a tobacco-free environment. When measures taken by Government so far could not deter people from using the tobacco products, whether a blanket ban on their production and sale is possible must be a subject of debate and discussion and of utmost importance to reconsider.

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