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## REVIEW ARTICLE

### A Paradigm Shift of Global Trends of Oral Cancer-A Call to Action

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#### ABSTRACT:

Oral Cancer is the 11<sup>th</sup> most common malignant disease in the world. Late diagnosis, high mortality rates and morbidity are characteristics of the disease. The estimated incidence, mortality and 5-year survival due to lip, oral cavity cancer in the world is 2.1%, 1.8% and 2.2% respectively according to data of GLOBOCAN 2012. This review summarizes the incidence, prevalence and mortality rates associated with oral cancer in different regions of the world.

**Key words:** Oral Cancer, Tobacco Chewing, alcohol consumption, trends in oral cancer, oral cancer epidemiology.

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#### INTRODUCTION:

Oral cancer is public health concern in both developing and developed nations. In Recent times a change in trend has been observed due to changes in lifestyle. Oral and Pharyngeal cancer is

ELEVENTH MOST COMMON CANCER WORLD WIDE (GLOBACON 2005). Differences across countries particularly relate to distinct risk profiles and availability and accessibility of health services. Tobacco use, including smokeless tobacco, and excessive alcohol consumption are estimated to account for about 90% of oral cancers.<sup>1</sup> 58th World Health Assembly Resolution on Cancer Prevention and Control (WHA58.22, 25 May 2005). Urged Member States to DEVELOP AND REINFORCE national cancer control program.

As reported in 2009, oral and pharyngeal is sixth most common cancer in the world.<sup>2</sup>

#### ORAL AND PHARYNGEAL CANCER TRENDS ACROSS VARIOUS CONTINENTS

- 1. Europe and European Union<sup>3</sup>**  
Incidence 2004: 67,000 (EU)  
Incidence 2012: 99,630 (E)  
73,020 (EU)
- 2. UNITED STATES OF AMERICA<sup>4</sup>**  
Incidence 2012: 26,064 (North America)  
Incidence 2013: 41,380 (North America)
- 3. AFRICA<sup>5</sup>**  
15<sup>th</sup> Most Common Cancer in Africa  
7<sup>th</sup> Most Common Cancer in North Africa

Paucity of quality data in Africa data from few hospital based cancer registries is available.

**Incidence 2012:** 17,276 new cases of lip and oral cavity cancer.

#### 4. ASIA<sup>6</sup>

**12th** most common cancer.

**8th** among all the cancers in men.

**Second most common cancer** among men in South-Central Asia.

**INCIDENCE 2012:** 16,88,50 new cases of lip and oral cavity cancer.

Bangladesh, India, Pakistan And Sri Lanka ; one third of all the cancers reported are Oral Cancer.

It is the third Most Common Type of Oral Cancer.

#### **BURDEN OF ORAL CANCER IN INDIA<sup>7</sup>**

ORAL CANCER RANKS IN THE TOP THREE OF ALL CANCERS IN INDIA

Accounts for over 30% of all cancers reported in the country.

Age standardized incidence rate : 20 per 100 000 population.

#### **SIGNIFICANT PUBLIC HEALTH PROBLEM<sup>8,9</sup>**

##### **GENDER**

The ratio of males to females diagnosed with oral cancer, however, has declined over the decades and is now about 1.5:1 for the mouth and about 2.8:1 for cancer of oropharynx.

Lifetime risk for mortality from cancer for both males and females is 61%.

According to statistics, the number of deaths in (2012) INDIA

36463            males

15361            females

More than 90% of cases report using tobacco products. 57% of men and 11% of women between 15- 49 years of age use some form of tobacco.

Forms of tobacco are use of smokeless tobacco: use of betel liquid, pan (pieces of Areca nut), processed or unprocessed tobacco, aqueous calcium hydroxide (slaked lime) and some pieces of are a nut wrapped in the leaf of piper betel vine leaf. Additionally gutkha, panparak, zarda,mawa, kharra and khainni.

Smoking includes use of cigarettes, bidi and hookah. These tobacco products are commercially available in sachets or packets and it is very popular among Young adults which leads to oral cancer in young age. Bidi smokers are 4 times at risk of developing oral cancer compared to non smokers.

The Global Adult Tobacco Survey India, conducted in 2009-10, revealed that 35% of adults used tobacco.

Tobacco-related cancers are expected to constitute 30% of the total cancer burden by 2020.

It is important to elevate smokeless tobacco, areca nut and oral cancer as an even greater problem than smoking for the Indian nation, and South Asia.

#### **ALCOHOL AND ORAL HYGIENE<sup>10</sup>**

A prospective study in India has found that alcohol consumption increases the incidence by 49% among current users and 90% in past drinkers. Consumption of alcoholic beverages was associated with increased risk for Oral cancer in men but it was not observed in women because very few women consumed alcohol. Poor oral hygiene related attributable risk is around 32% for men and 64% for women in India. Patients wearing dentures for more than 15 years and not visiting a dentist regularly was highly associated with Oral cancer

In India, the incidence of oral cavity cancers, is still one of the highest in the world because tobacco products are easily available and the lack of awareness in the community Oral cancer can be prevented by action against risk factors, especially tobacco which is the key factor. The enforcement of laws on youth access to tobacco and alcohol; the prohibition of all advertising and promotional activities by the tobacco industry the prominent inclusion of strong pictorial warnings in existing written warnings on the labels of tobacco and alcohol products. More multi center randomized controlled trials of dietary supplementation for persons with precancerous lesions are required to assess the efficacy of vitamins, retinoid and carotenoids. The role of HPV should be tackled in culturally acceptable health programmes promoting safe sexual practices.

Education campaigns are needed to raise public awareness about oral cancer and its links with tobacco and alcohol consumption. -Facilities for accurate staging, including advanced imaging, and experienced multidisciplinary teams can improve long term survival and quality of life.

Improved public health education and promotion is vital, as are top down policy approaches such as those of the Framework Convention on Tobacco Control, extended to include all forms of smokeless tobacco. Much excellent work on the control of the continuing pandemic of oral cancer in India is ongoing.

#### **CHALLENGES FACED<sup>9,10</sup>**

The variation in incidence and pattern of the disease can be attributed to the combined effect of ageing of the population, as well as regional differences in the prevalence of disease-specific risk factors

Diagnosed at later stages which result in low treatment outcomes and considerable costs to the patients whom typically cannot afford this type of treatment.

Secondly, rural areas in middle- and low-income countries also have inadequate access to trained

providers and limited health services. As a result, delay has also been largely associated with advanced stages of oral cancer

Thirdly, oral cancer affects those from the lower socioeconomic groups, that is, people from the lower socioeconomic strata of society due to a higher exposure to risk factors such as the use of tobacco

Even though clinical diagnosis occurs via examination of the oral cavity and tongue which is accessible by current diagnostic tools, the majority of cases present to a healthcare facility at later stages of cancer subtypes, thereby reducing chances of survival due to delays in diagnosis

Public health officials, private hospitals, and academic medical centres within India have recognised oral cancer as a grave problem. Efforts to increase the body of literature on the knowledge of the disease aetiology and regional distribution of risk factors have begun gaining momentum.

### **Global incidence of oral and oropharyngeal cancer in young adults**

1975 to June 2016.

21 population-based studies, 15 countries.

These showed an increase in OOPSCC over time except in NETHERLANDS AND INDIA.

A rise in tongue cancer among white women and oropharyngeal cancer in white men was observed.

Highlighted are requirements for defining age cut-off for young adults,

### **SITE<sup>9,10</sup>**

**TONGUE:** Most common site for intraoral cancer among European and the US populations, amounting to 40–50% of oral cancers.

**BUCCAL MUCOSA:** More common among Asian populations due to betel quid/tobacco chewing habits.

### **CULTURAL PRACTICES**

Cultural practices are important risk factors for development of oral cancer.

South Africa, USA various ethnic groups showed positive correlation.

UK found a weak correlation.

### **AGE**

The risk of developing oral cancer increases with age and the majority of cases occur in people aged 50 or over. From 2000 to 2004, the median age of diagnosis in USA was 62 years. Increased incidence and mortality rate among young adults below 40 years in

EU and USA. Prevalence of 11.3% of oral cancer is reported among patients below 45 years of age

About 6% of oral cancers occur in young people under the age of 45 years.

### **GLOBAL FOCUS**

In order to address delays in diagnosis, the National Institute for Clinical Excellence (NICE) of UK Department of Health took the initiative to set up National Guidelines for referral of suspicious oral lesions to cancer centres.

Qualitative studies to understand delays and poor access to treatment centres with the aim of improving the delays of journeys of oral cancer patients would help to improve mortality rates

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