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PREVALANCE OF ORAL CANCER IN INDIA

Dr. Satish Tejrao Bhagat , ** Prof. K. K. Pandey
**PhD scholar, **Professor,*
Deptt of Sangyaharan,
IMS, Banaras Hindu University
Varanasi
Uttar Pradesh 221005

ABSTRACT:

Alfred Adler, founder of the Individual Psychology says that "the style of the life is the unique way in which individuals try to realize their fictional final goal and meet or avoid the three main tasks of life: work, community, love". Lifestyle simply means the way in which person lives. There has been growing evidence that lifestyle factors may affect the health and lifespan of an individual. Many diseases like diabetes, cardiovascular diseases, metabolic syndrome, stroke, cancers are includeded in lifestyle disorders. The common causes are alcohol, drugs and smoking abuse as well as lack of physical activity and unhealthy eating. In developing countries like India, addiction is one of the major culprits. With highly spreading faulty lifestyle cancer is emerging as a major public health concern in India. According to WHO, India has a cancer mortality rate of 79 per 100,000 deaths and accounts for over 6 percent of total deaths. Oral cancer ranks in the top three of all cancers in India, which accounts for over thirty per cent of all cancers reported in the country. It is defined as uncontrollable growth of cells seen in the oral cavity. It appears as a growth or sore in the mouth that does not cure. Oral cancer includes cancers of the lips, tongue, cheeks, floor of the mouth, hard and soft palate, sinuses, and pharynx. Squamous cell carcinoma is the most common type of oral cancer. In this review article we will discuss prevalence, management, cause, symptoms, diagnosis and management of oral cancer in India.

Keywords: oral cancer, lifestyle, prevalance, India.

INTRODUCTION:

In this 21st century the major health problems are lifestyle disorders due to sedentary lifestyle and faulty dietary habits. Most of the world's population belongd to the low and middle income contries. Abdle Omran coined the term 'epidemiological transition'[1] i.e a phase of development witnessed by a sudden and stark increase in population growth rates brought by improved food security and innovations in public health and medicine, followed by a re-leveling of population growth due to subsequent declines in fertility rates. This accounts for the replacement of infectious diseases by chronic diseases over time due to increased life span as a result of improved health care and disease prevention. This will lead to a shift in disease burden from a predominance of infectious diseases to a growing contribution of noncommunicable diseases (NCDs), mostly diseases related to lifestyle. Cancers are the most common cause of death in adults globally (29%) in year 2001. [2] Oral cancer is any malignant neoplasm which is found on the lip, floor of the mouth, cheek lining, gingiva,

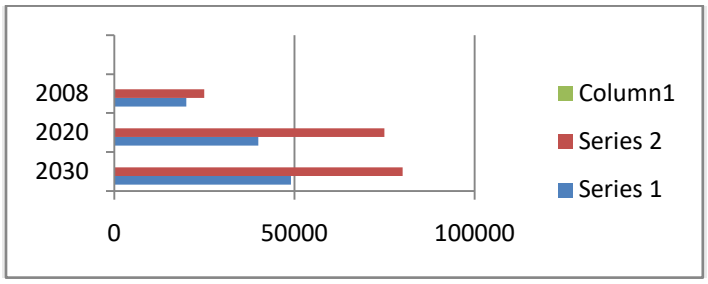
palate or in the tongue. Oral cancer is among the top three types of cancers in India [3]. The most common causes of oral cancers are use of tobbacco, alcohol consumption, chewing betal nut and human pappiloma virus. [4]. Many studies have shown the association between the use of tobacco and high oral cancer incidence.[5] Mehta *et al*. reported the reduced incidence of oral cancer among those who stopped or reduced tobacco use in rural population. The incidence of oral cancer is high among indiance. In India, 90 -95% of the oral cancers is squamous cell carcinoma [6]. The international agency for research on cancer has predicted that India's incidence of cancer will increase from 1 million in 2012 to more than 1.7 million in 2035. This indicates that the death rate because of cancer will also increase from 680000 to 1- 2 million in the same period [7]. Oral cancer is interrelated with low socio-economical class as factors like nutrition, health care, living condition and risk behaviors contributes to the development of oral cancer [8]. When cancer is diagnosed it often leads to high

Personal health expenditures. Due to expenditures the entire families push below the poverty line and may threaten social stability [9]. In recent years, no significant advancement in the treatment of oral cancer has been found though the present treatments improve the quality of life of patients but the overall survival rate of 5 years has not improved in the past decades. In this review article we will discuss prevalence, management, cause, symptoms, diagnosis and management of oral cancer in India.

STATUS OF ORAL CANCER IN INDIA:

As many as 2,500 persons die every day due to tobacco-related diseases in India [10]. Smoking accounts for 1 in 5 deaths among men and 1 in 20 deaths among women, accounting for an estimated 9,30,000 deaths in 2010 [11]. Oral cancer is the most common cancer in India amongst men (11.28% of all cancers), fifth most frequently occurring cancer amongst women (4.3% of all cancers) and the third most frequently occurring cancer in India amongst both men and women [12, 13]. Cancer registration is not compulsory in India, so the true incidence and mortality may be higher. A number of studies use data from urban and rural cancer registries established at the national regional level. Mostly it is diagnosed at later stages which result in low treatment outcomes and high costs. Many patients cannot afford the treatment. Earlier detection of oral cancer offers the best chance for long term survival and has the potential to improve treatment outcomes and make healthcare affordable [14]. Oral cancer affects the people from the lower socioeconomic status of society and people in rural area due to a higher exposure to risk factors such as the use of tobacco [15, 16].

Graph 1: Incidence of oral cancer among Indian population:



According to the statistics, in 2012 the incidence of oral cancer in India is 53842 in males and 23161 in females [17]. Incidence of oral cancer increases by age [18]. The commonest age is the fifth decade of life [19]. Considering the gender in all the age groups, men are more affected than women. In India, men are two to four times more affected than women due to the changes in the behavioral and lifestyle patterns [20]. However, high incidence rates are seen amongst the sub populations of women in southern India because of tobacco chewing [21]. Cancer in the tongue is the most common type of cancer and the common site is buccal mucosa and gingiva. In Uttar Pradesh, buccal mucosa or cheek cancer exceeds all the other types of cancer. Cancer in the tongue is the most common type of cancer and the common site is buccal mucosa and gingiva. In Uttar Pradesh, buccal mucosa or cheek cancer exceeds all the other types of cancer. The incidence of oral cancer in patients who have smoking and tobacco chewing habit is 8.4 times higher than that of patients who did not have that habit. Oral cancer incidence depends on both qualitative and quantitative points of view. A study states that the use of tobacco in the form is smoking has 5.19 time's higher risk or precancerous lesion on palate when compared to that of tobacco chewing. States like Uttar Pradesh, Jharkhand and Bihar in India witness more risk of oral cancer [22].

Regional variation:

Oral cancer incidence and mortality is generally high in affluent States. Oral cancer mortality relates is high due to the mortality in rural areas where cancer treatment facilities are scarce. Poor individuals are also at a higher age-specific mortality risk than are an affluent people. Indian States like Tamil Nadu and Kerala achieve relatively good health outcomes, future health developments will be integrally linked to the nation's economic fortunes and collective commitment to equity and universal health care provision [23].

Causes of Oral Cancer:

- Consumption of tobcco
- Positive family history
- Viral infections like HPV

- Poor oral hygein
- Alcohol consumption

Consumption of tobcco:

Estimates indicate 57% of men and 11% of women between 15- 49 years of age use some form of tobacco [24]. More than 90% of OC cases report using tobacco products [25]. The 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 is a nut wrapped in the leaf of piper betel vine leaf. Additionally gutka, panparak, zarda, mawa, kharra and khainni. These are dry mixture of powdered tobacco, lime and Areca nut flakes which are chewed or sucked orally. Women chewing tobacco 10 or more times a day have risk 9.2 times that of non-tobacco chewers irrespective of age of initiation of tobacco chewing. Univariate analysis revealed that, in terms of oral dipping products, the risk was 7.3 for consumption of gutka, 5.3 for consumption of chewing tobacco and 4 for consumption of supari (pure areca nut. However, the lower risk was found for mishiri.

Alcohol Consumption:

Drinking alcohol is an important risk factor for oral cancer. Risk increases with number of drinks consumed in a week. A prospective study in India has found that alcohol consumption increases the incidence by 49% among current users and 90% in past drinkers [26]. This could be due to residual effect of alcohol consumption or them having quit the habit due to serious illness. 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 [27].

Oral Hygeine:

Poor oral hygiene also causes oral cancer. In one study, more than 85% of oral cancer patients had poor oral hygiene [28]. Poor oral hygiene related attributable risk is around 32% for men and 64% for women in India. A patient wearing dentures for more than 15 years and not visiting a dentist regularly was highly associated with Oral cancer [29].

Preventive Measures:

Oral cancer will remain a major health problem and the incidence will increase by 2020 and 2030 in both sexes, however early detection and prevention will reduce this burden.

- 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[30]
- More multi centre randomized controlled trials of dietary supplementation for persons with precancerous lesions are required to assess the efficacy of vitamins, retinoids 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 longterm survival and quality of life.

CONCLUSION:

In this review an idea on burden, prevalence, regional variation in India, cause, symptoms and prevention of oral cancer have been discussed. The mortality from cancer in India for both males and females is 61%. According to statistics, the number of deaths in 2012 due to oral cancer is 36463 in males and 15361 in females. Use of preventive measures will reduce the incidence and mortality of oral cancer and for better survival. Because of the high population in India, cancer control activities should be prioritized to make maximum use from the limited resources. People less than 40 years who are habitual cigarette smokers, alcohol consumers, and betel quid chewers must undergo oral mucosa screening regularly so that oral cancer can be identified as early as possible.

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