

# Oral Cancer: A Retrospective Study of a Decade

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**Abstract:** *Introduction Head besides neck cancer(HNC) The word "avast" contains a variety of malignancy sites, including numerous oral cavity locations, such as maxilla, mandible, tongue, oral floor, oral mucosa, gingiva, mouth or pharynx and larynx. mouth cancer is amongst the most frequent cancers in tumors. The purpose of this research is to investigate the occurrence of HNC as well as its association with traditions, age , gender and place throughout India.*

**Aim:** *The goal of the research was to document the effect on Odisha coastal communities in East India for Head / Neck Cancer (HNC) and also its meanings by behaviors, age , gender as well as location.*

**Materials and methods:** *A study was conducted retrospectively between June 2009 and June 2019. A maximum of 1364 OSCCs (Oral squamous tissue carcinoma) were analysed with the results were statistically analyzed.*

**Result:** *Ratio of men to women 2:1 as well as average age between 40 and 59 years. Oral mucosa (48,97%) including tongue (16,49%) or maxila (6,94%) are now the most popular site for cancer, accompanied by lip (1 24%). Tobacco cigarettes and nibbling habits were prevalent amongst these people of eastern India as well as represented the greatest potential risk for onset of disease. Besides that, a strong relationship with OSSC has been discovered in the smokeless type with tobacco, particularly in females.*

**Conclusions:** *The result of this evaluation reveals the use of tobacco is among the main reasons for increasing oral cancer malignancy development. Therefore, it is important for an individual to be informed of this tobacco-linked cancer growth.*

**Keywords:** *HNC, OSCC, OC, buccal mucosa, tobacco, smoking*

## 1. INTRODUCTION:

Malignant growths are the most widely recognized reason for death in adults. CSC is an broad term that encompasses numerous locations inside an oral cavity, including the maxilla, skull, jaw, oral tissue, buccal mucosa, gingiva, hard and soft palate, lingo, oral besides

pharynx as well as larynx. tumor of the head besides neck (HNC). One of the other most commonly identified cancers are oral cancer.

Squamous cell carcinoma (SCC) seems to be mainly a most dominant form of cancer which is regarded among the most major public health hazards, given symptoms as well as high mortality rates. Pale cell carcinoma seems to be a malignant neoplasm that's also discovered throughout the oral cavity (mucosa, gums as well as hard palate, tongue as well as lip) from such a squamous epithel. The larger part (84%–97%) of HNC remain SCC which rise from preceding " Oral potentially malignant disorders " (OPMDS) or all the more regularly from typical arising from epithelium.<sup>1</sup> The expression "Oral possibly malignant illnesses " is suggested by WHO in 2005. It incorporates both oral premalignant lacerations besides circumstances. There are number of OPMDS which constitute a detectable preclinical phase of OC. The most important ones are oral sub mucous fibrosis, leukoplakia, erythroplakia, candidal leukoplakia, lichen planus. Annually about 300,000 persons are reported to also have HNC worldwide<sup>3</sup> India, via an reported 1 percent of the population through OPMDS, also has highest per capita (almost 20%) amount of CNH<sup>33</sup>. Around 95% of oscocci arise via an estimated diagnosis age of about 60 years.<sup>4</sup> Various threat biological and environmental variables such as smoking all over the world., dietary factors, and genetic factors are considered as etiological factors for oscc. Clinically, oscc appears mostly painless red or white lesion, proliferative, infiltrative, or ulcerative growth. The greatest mutual sites are buccal mucosa, alveolus, lips, palate depending on the form of tobacco usage. Numerous researches have been led across the world to study the prevalence and factors affecting OC.<sup>4,5</sup> In India, the usage of tobacco is abundant because of easily availability and very low cost. Tobacco in different parts are used in different forms may be local forms or commercially available. This research would research the incidence of HNC throughout the western populace of Odisha, as well as its relationship with behaviors, age , gender as well as sites<sup>6</sup>.

## 2. MATERIALS AND METHODS

A retrospective investigation of 1364 patients was conceded from June 2009 to June 2019 Oral Medicine and Radiology Department and cancer hospital in eastern India. Ethical clearance was obtained from the institutional ethics committee. Pervious patient's records were retrieved from outpatient registers and special case registers, which included all HNC cases involving buccal mucosa, alveolus (maxilla, mandible), gingivobuccal sulcus, solid and indulgent palate, bottom of mouth, pharynx, larynx, etc. Habit history of patients including all forms of tobacco chewing, smoking, and alcohol along with quantity and duration was recorded in clinical proforma. Information of patient's oldness, gender, besides location of OC were taken for analysis. The data recorded were entered in MS Excel sheet and a comprehensive examination was prepared and outcomes were framed.

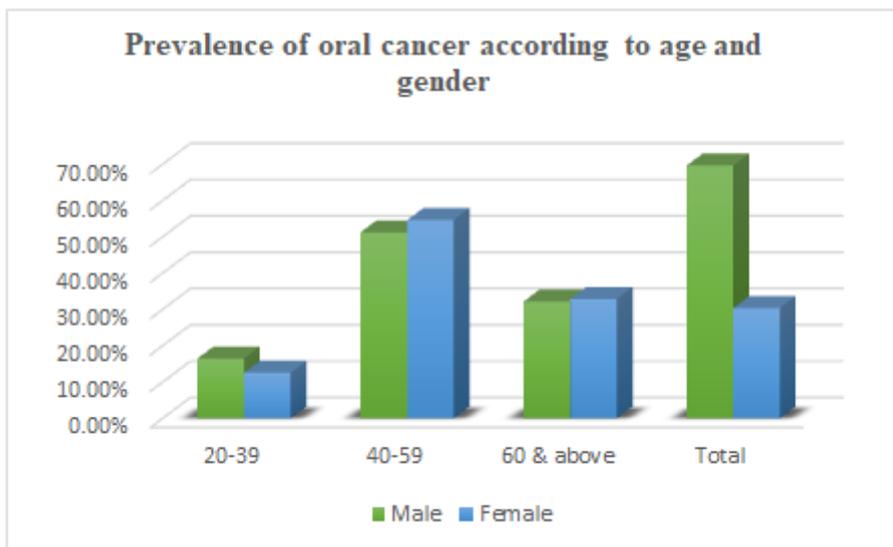
## 3. RESULTS

Of the 1364 OSCC patients, men represented a higher proportion (69.65%) of OSCCs than women (30.35%). Whereas the age between 40-59 showed more number of active OSCCs than other age group in both male (51.26%) and female (54.58%).

Table 1: Occurrence of oral cancer conferring to age and gender

Gender & Age	20-39	40-59	60 & above	Total
Male	157	487	306	950
Female	52	226	136	414
Total	209	713	442	1364

Figure 1

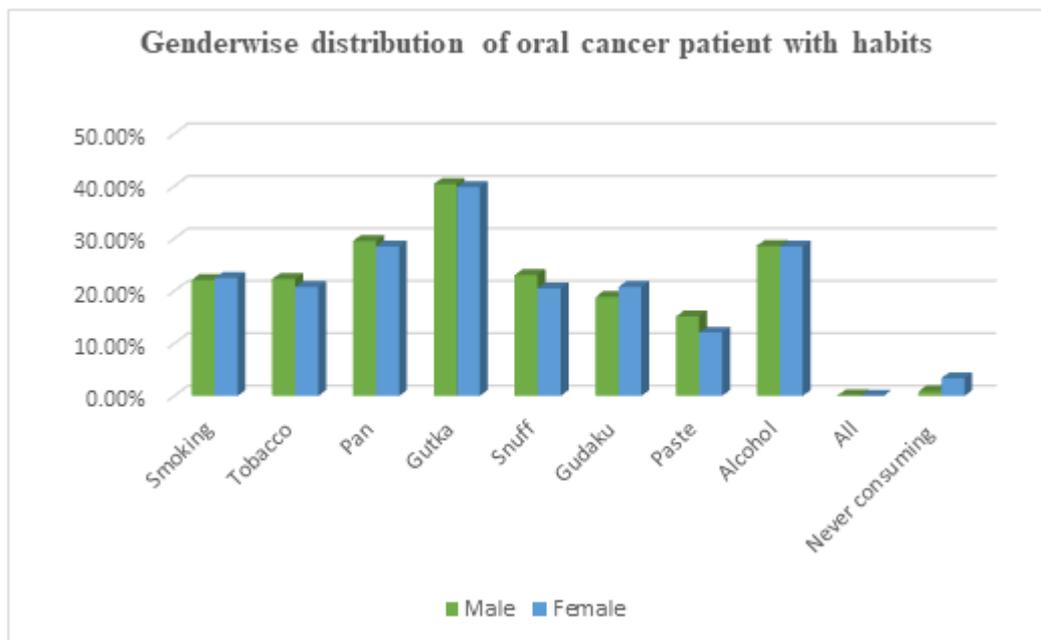


Common habits of male patients were gutka (40.42%), pan (29.57%) and alcohol (28.63%) whereas snuff (23.05%), tobacco (22.31%), and smoking (22.10%) also done by most of the patients. In female patients gutka (39.85%), alcohol (28.50%) and pan (28.50%) were seen in many number, where smoking (22.46%), tobacco (20.77%), gudaku (20.77%), and snuff (20.53%) seen in almost in equal number. Almost all habits were seen in only one male patient. It was also seen that 8 male patients and 14 female patients were recorded with no bad habits.

Table 2: Gender wise distribution of oral cancer patients with habits

Habits	Male	Female
Smoking	210	93
Tobacco	212	86
Pan	281	118
Gutka	384	165
Snuff	219	85
Gudaku	179	86
Paste	144	50
Alcohol	272	118
All	1	0
Never consuming	8	14

Figure 2



The most common site of cancer in both male and female patients remained buccal mucosa (48.97%) besides tongue (16.49%). This was trailed by rest of the maxilla (6.94%), mandible (5.13%), besides gum (4.96%). The slightest mutual location was lips in both the genders (1.24%).

Table 3: Site wise distribution patients with oral cancer

Site	Male	Female	Total
Buccal mucosa	466	202	668
Mandible	28	42	70
Maxilla	71	24	95
Gum	41	23	64
Tongue	194	61	255
Lip	7	10	17
Others	143	52	195
Total	950	414	1364

Figure 3

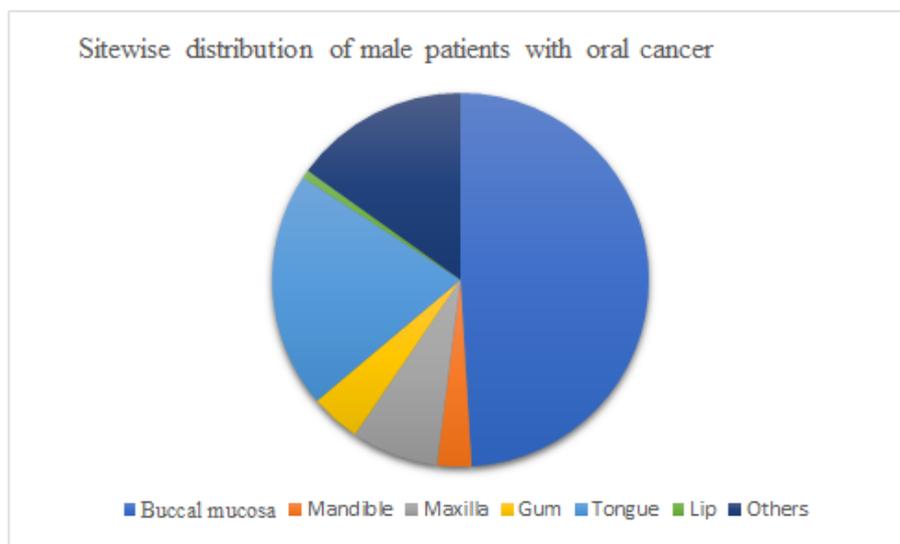
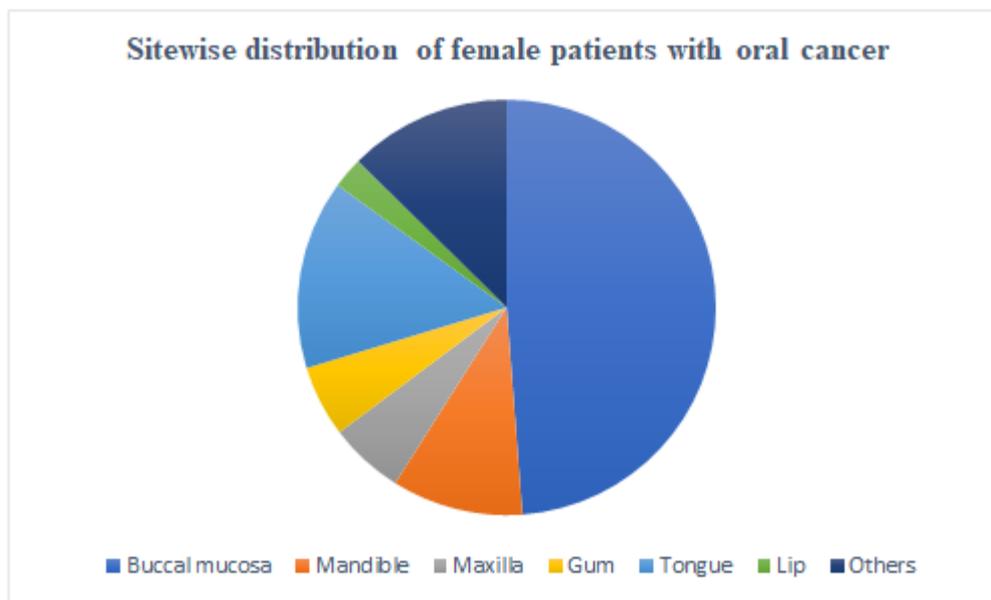


Figure 4



#### 4. DISCUSSION

OC positions the sixth most regular threat in Asia. In South-Central and Southeast areas developing countries, for example, India, Sri Lanka, Pakistan, and Taiwan OC is the third greatest mutual cancer of malignant growth after the cervix and gastric cancer.<sup>7</sup> OC has a multifactorial etiology, which includes chronic use of smoking and smokeless form of tobacco and alcohol. In Southeast Asia and India, chronic use of betel (pan) and tobacco along with alcohol has been intensely related through a great threat of OC and poor oral hygiene.<sup>8,9</sup>

The threat of OC rises through the quantity, frequency and period of usage of alcohol, tobacco, gutka besides pan. The development of oral possibly malignant disorders enhanced by the exposure of smokeless tobacco which contain multiple carcinogens with increased exposure.<sup>10</sup>

In the oral cavity, due to the employment of tobacco quid like gutka and betel quid the buccal mucosa, gingiva and buccal sulcus are more frequently affected.<sup>15</sup> In one of the previous study it has been reported that in smokeless tobacco users the micronuclei cells were found to be expressively higher than in smokers. In previous studies SSC patients showed significantly increased nuclear length, nuclear part, cell part, nuclear-cytoplasmic proportion in oral leukoplakia, oral verrucous carcinoma than normal mucosa which was statistically significant.<sup>11-12</sup>

In our study, the uppermost occurrence of OC remained understood throughout age cluster of 40-59 years, followed by 60 years and above, which was also in accordance with the previous studies.<sup>13</sup> Male to female ratio was found to be 2:1 in this study, which was in accordance with various previous studies where high incidence was noted in male than female due to the frequent access to tobacco products.

Most of the patients were gutka chewers (in male 40.42% and I female 39.85%), followed by patients with various bad habits like alcohol, smoking, tobacco, pan. Previous studies have shown that the association of tobacco with OC, which was in accord through in our investigation.<sup>13</sup>

In this investigation buccal mucosa remained initiate to stay the greatest mutual site in both genders (48.97%), followed by tongue (16.49%) and maxilla (6.94%) besides the slightest mutual location was lips (1.24%). These results were in accordance with other previous

studies disclosed buccal mucosa as the most common site. Most of our patients were using tobacco and gutka which may be the object for buccal mucosa as the common site. While language and mouth base in western nations are much more popular caused by alcohol including smoking<sup>14</sup>, which may have a synergistic effects on oral mucosa. The tracking level or metastatic position of OC are very much important as it determines the treatment plan. Various treatments such as radiotherapy, chemotherapy, and surgery are available depending on the site and stage of OC. Good treatment results are seen in their early developmental diagnosis.

## 5. CONCLUSIONS:

Tobacco utilization is the vital etiological factor for Progress of oral cavity carcinoma. The OSCC were 40-59 years old as one of the most frequent occurrence. The most prominent places in odisha are buccal mucosa including gingival sulcus due to the extreme consumption of non-smoking tobacco. Early discovery of OC consistently helps in the management of patients and survival rates. There is need about this tobacco-related cancer and immediate consultation on suspicion of cancer.

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