ORAL ONCOLOGY OF MOUTH CANCER

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ABSTRACT

Mouth cancer that happens in any piece of the mouth; on the tongue's surface in the lip inside the cheek in the gums, in the top and floor of the mouth in the tonsils furthermore the salivary glands. Risk factors include tobacco use, heavy alcohol use, and Human Papillomavirus infection. In the treatment includes surgery and radiation therapy. In some cases, chemotherapy may be required These mouth cancer spread quickly. Overall 60 % oF people survive from mouth cancer.

KEYWORDS: Oral oncology, Mouth cancer, Papillomavirus, Chemotherapy, Radiotherapy, Autofluorescence spectroscopy.

INTRODUCTION

Oral cancer is especially common to disadvantaged old and people with Restful factor of Smoking tobacco drinking alcohol.[1]

Recent there has been an Increase in the Development of oral Cancer Screening tools However, visual examination and plat palpation have remained the gold Standard technique for the identification of mucosal lesion of the Oral cavity.[2]

Oral cancer is highly prevalent in India, Pakistan, Brazil Bhutan france, Afghanistan, Bangladesh, SRI lanka Nepal Iran and maldives, ranking first or second with respect to different types OF cancer occurrence in these Countries. And oral cancer occurrence is high In developing countries and the most common cancer in india.[3]

Cancer of the floor of mouth (CFOM) Is one of the tumors that are difficult to be detected in Eary Stages It is usually recognized when it become symptomatic, an often reaches an advanced Stage at the time of diagnosis.[2]

Oral cancer Is a term that usually includes Cancer OF the up, tongue salivary glands, and other Site in the mouth (gum floor of mouth and othe unspecified part of the mouth) Approximate 90% OF oral cancer Croma (asus) are squamouS cell carcinomas (oscc).[1]

Oral Cancer a major public health problem with 350000 to 400000 new cases identified worldwide each year worldwide, oral squamous cell venom OSCC) Is the sixth most common cancer for both Sexes.[1]

Oral cancer usually occurs at accessible sites, enabling early detection by visual Inspection. fanconi anemia (FA) is a recessive disorder associated with a high tisk of developing head and neck Solid tumor.[4]

Etiology and Pathophysiology

Oral cancer is one of the 10 most common Cancers in the world and Shows marked differences to occurrence. Oral geography cancer Is common where betel quid chewing bidi smoking and alcohol tobacco consumption are high. Thus it is a common Cancer in southeast Asia, where more than 100,000 new cases are reported every year.[5]

The original data were coded along four different Revisions of the International classification of diseases and were therefore, recorded according to the Ninth Revision. Oral Cancer Include the cancer of the lip, tongue, salivary glands, mouth oropharynx, nasopharynx and hypopharynx.[6]

Pathophysiology

Recognised risk factor are tobacco Smoking and alcohol consumption. Betel quid and Smokeless tobacco chewing are aso important risk factors in Some populations, and human papillomavirus (HPV) infection appears to be a Risk Factors for young populations.[7]
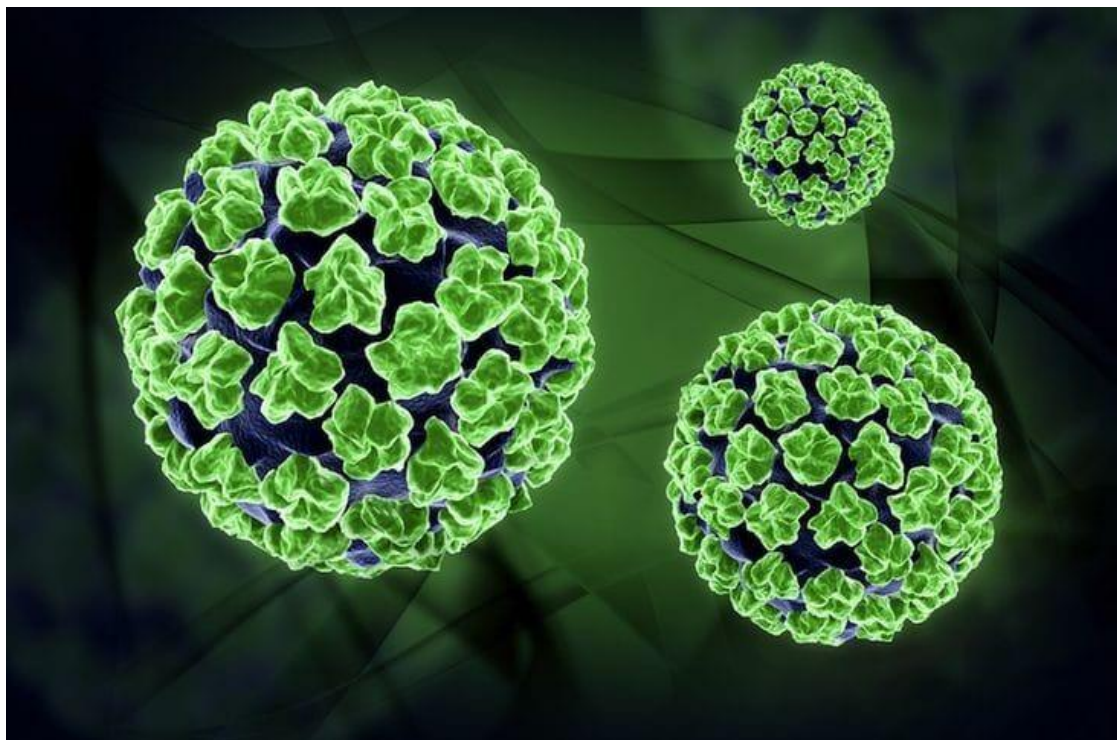
Figure no. 1: Human Papillomavirus (HPV).

Human papillomavirus (HPV) is one of the most common causes of sexually transmitted HPV is classified as High risk (or oncogenic), Which is a associated with malignancies or low-risk (or non oncogenic) Which is elated to benign disease![8]

Oral or oropharyngeal HPV infections were identified in 738 patients[8]
The incidence of oral cancer increases with age in both males and females, although there are now Substantial increases taking place in the incidence of oral Cancer in countries of low and intermediate incidence and in younger person mostly oral cancer is seen elderly men.[9]

These problems are arising due to bad Habits like betel chewing Chewed betel held în mouth for long periods along with a Variety of ingredients in a betel quid.[9]

Cigarette Smoking, cigarette Smokers have an increased risk Of Cancer lips, toungue, mouth and pharynx. These appears to be higher Smokers for Black tobacco, smoking and alcohol Reverse Smoking, Cigar Smoking, pipe Smoking, Bidi smoking, smokeless tobacco, Alcohol, mouthwash alcohol and smoking appears to have a synergistic effect on the risk of the Oral cancer.[9]

Symptoms

Signs and Symptoms of mouth cancer may Include,

- A lip or mouth sore that doesn't heal

-A White or raddish patch on the inside of your mouth

-Loose teeth

-Growth or lump Inside your mouth

-Mouth pain

-Ear pain

-Difficult or painful swallowing
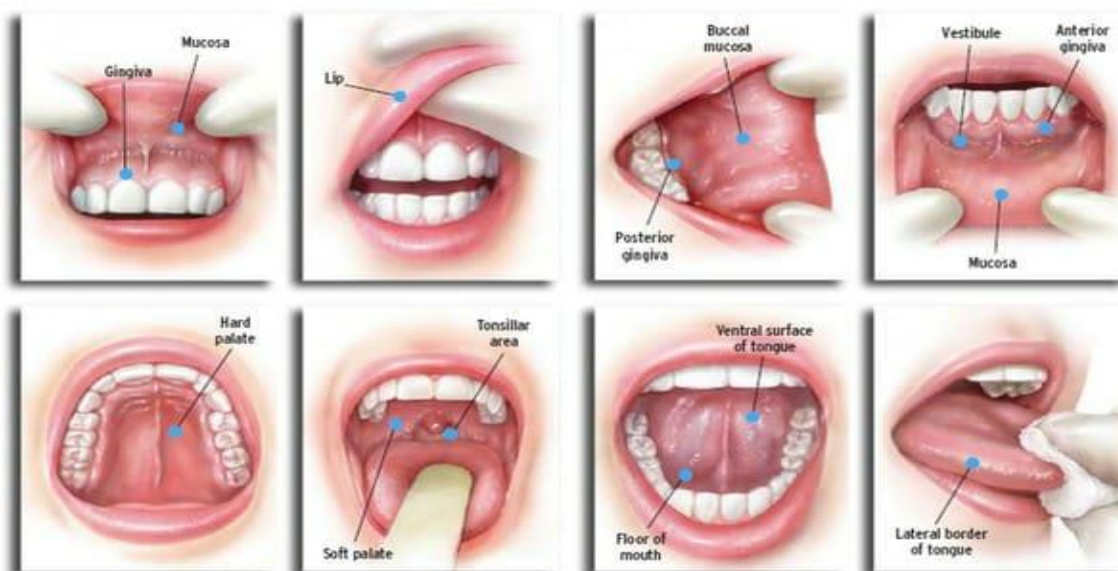

Figure no. 2. Site of oral cancer.

Figure no. 3: Symptom of mouth cancer.

Figure no. 4: Symptoms of mouth cancer.

Twelve types of Initial pain complaints were found only in the case of buccal mucosa cancer was there no case of patients with self-reported pain. The Correlation between with the pain complaints and the Oral Cancer.[10]

- Sore throat

-Pain in the tongue

-pain in the mouth

-Pain when Swallowing

-Dental pain

-Earache

-Pain in the palate

-Burning mouth

-Pain in gingival

-Pain when chewing

-Pain in the neck

 -Pain in the face[10]

Mouth cancer form when cells on the lips or in the mouth develop changes (mutations) in their DNA. A cell DNA Contains the instructions that tell a cell what to do.

The accumulating abnormal mouth cancer cells Can form a tumor. With time they may Spread inside the mouth and on to other areas of head and neck or other parts of the body.

Mouth cancers most commonly begin in the flat, thin cells (squamous Cells) that fine your lips and Inside of your mouth. Most oral cancers are Squamous cell carcinomas.

It's not clear What causes the mutations In squamous cells that lead to mouth cancer.

DIAGNOSIS

Optical techniques

Visual autofluorescence (Autofluorescence Spectroscopy) has been tested in the mouth with promising result that it can distinguish normal tissue from tumors. The system consists of a small optical Fiber that produces various excitation wave lengths and spectrograph that receives and records on a computer and analyses, via dedicated Software, the spectra of reflected fluorescence from the tissue.[11]
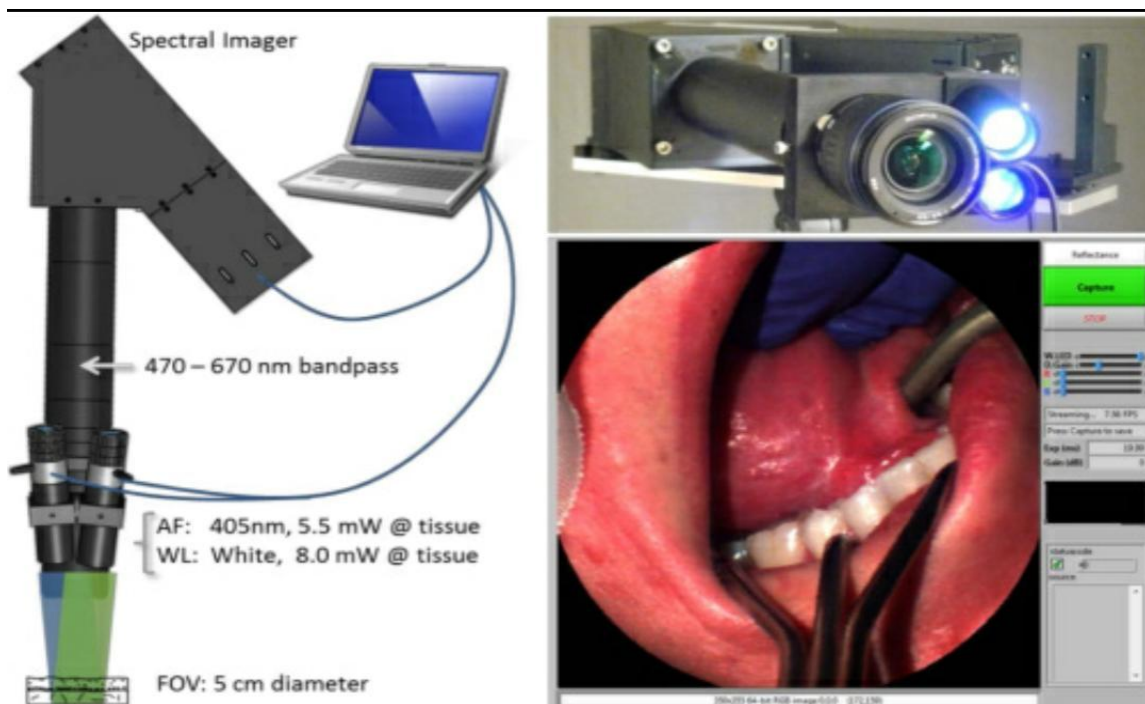

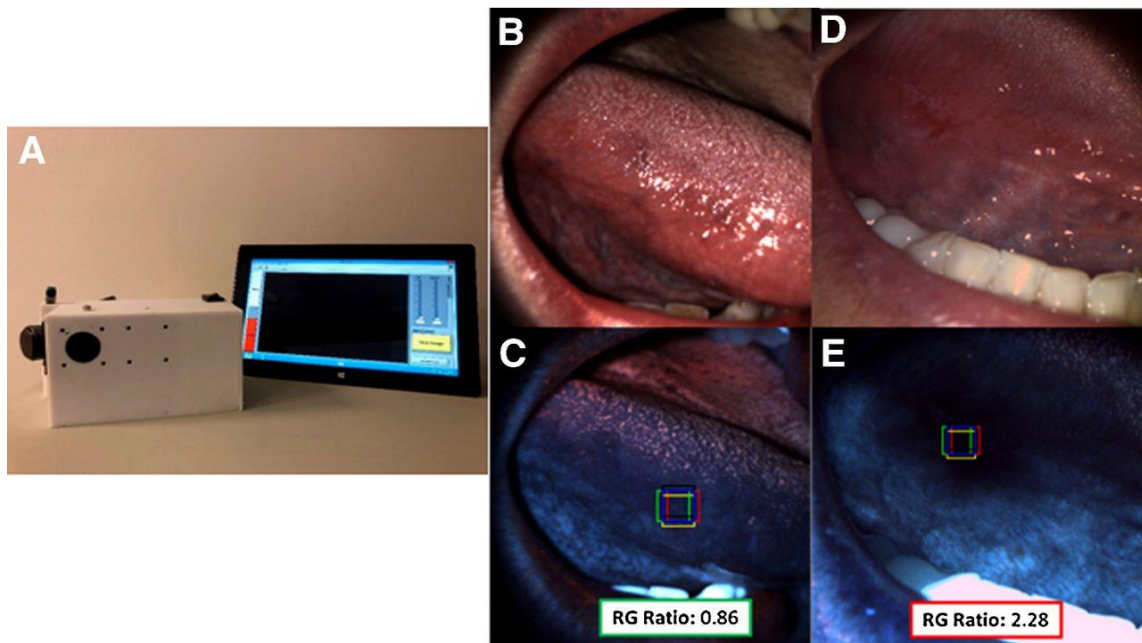**Figure no. 5. Fluorescence spectroscopy.**

Figure no. 6. Fluorescence spectroscopy.

This technique has the advantage of eliminating subjective interpretation and can provide diagnostics in real time, non – Invasively and In situ.[11]

Dentists appear to do regular oral cancer examination on for their patients but not in a systematic way. Potentially malignant lesions were found to be less we recognised than Frank Malignancy. Reassuringly though, dentists referred when in doubt about a lesions. Dentists reported difficulty in explaining to patients that they had a potentially malignant because; of the lack of a definitive Diagnosis.[7]

Auto fluorescence the use of a autofluorescence to detect the malignant lesion emanated from Photodynamic therapy, a technique for cancer treatment. Autofluorescence describe the biologic characteristics of tissues possessing endogenous fluorophores Such as Flavin, tryptophan, elastin and collagen, which become fluorescent when exposed to certain wavelengths of light.[12]

Narrow band Imaging (NBI) Is an endoscopic technique using narrow band spectrum optical filters to enhance the visualization of mucosal and submucosal microvascular pattern. The technique is based on the fact that the depth of penetration of light is dependent on its wavelength. The filter used in NBI select Blue And light green fight wavelength of 415 and 540 nm.[11]

Molecular Techniques

The use of saliva and plasma in detection tumours including distant metastasis being investigated. These sources have been used to identify hypermethylation specifically of promoters of tumor suppressor genes P16, MGMT, RARB, E-cadherin, and DAPK.[11]

Treatment

In the past, radiation and surgery either alone or combination are used for the treatment of squamous call carcinomas of oral cavity. Although chemotherapy was initially used treatment for palliation.[13]

Recent studies suggest that the chemotherapy along with radiation may have greater value to treat the disease.[13]

Methods

Four separate steps for treatments,

1. Endoscopy was performed on each patient, usually under anaesthesia lesions were measured and staged, margins were tattooed with Indian ink for future reference and biopsy.

2. Then treatment was started immediately, (the first cycle) included: I) cisplatin was given intravenously (IV) on the first day that is 75mg/m. 2) 5-fluorouracil 1,000 mg/m/d was given continuous IV infusion after 4 days begin. 3) Radiation was given in 15 fraction over 3 weeks that is 30 Gy. And 4) An identical course was performed of 5-Fluorouracil and cisplatin without simultaneously radiation administered 1 to 3 weeks after completion of radiotherapy.

3. A minimum after 8 weeks of the beginning Induction therapy, patient was evaluate for response. Careful examination of the original site was performed, under anaesthesia if necessary, with multiple biopsies was taken. Radiography studies was repeated, to confirm clinical assessment. This complete response was defined as disappearance of all radiographic, clinical, and when applicable, histologic evidence of disease.

4. After surgery was performed, every patient was offered for a second full course of combined-modality therapy (second cycle), similar to the first, overall total of 4 chemotherapy courses was performed and under 60 Gy of radiation. After completing treatment, patients cause to become free of disease were they are seen every 2 months and clinically assessed for not occurring again. Patients with persistent or recurrent disease were removed from the study and treated at the investigator's discretion.[13]

Therapeutic approach technique

Non-invasive pharmacologic therapy Oral, rectal, transdermal, subcutaneous, or intravenous administration of NSAIDs, opioids and adjuvant drugs Invasive interventions Peripheral nerve blocks.

– Maxillary nerve

– Mandibular nerve

– Glossopharyngeal nerve

Ganglion blocks

– Sphenopalatine ganglion

– Trigeminal ganglion

– Stellate ganglion

Central neuraxial techniques

– Intraventricular opiates

– Intrathecal pump[14]

CONCLUSION

There are some grounds to optimism given the prospects for control of these Cancer. Primary prevention should however focus on the main the reduction of Causes, namely, tobacco, tobacco related products alcohol consumption.

In the evaluated sample, oral cancer was the fourth most prevalent type, pre dominating for the sixth decade of the life, in a ratio of 4 male to 1 female radiotherapy was the most used treatment in oral cancer therapy.

REFERENCES

1. Oral cancer Crispian scully, university college london, london UK Narendran Andrew Robinson, Faculty of Dentistry National university of Singapore Singapore David R Moles, 4: 668-677.

2. Clinical impact of Iodine Staining of diagnosis of carcinoma in situ in the floor of mouth, decision of adequate surgical margin Akihito watanabe masanobu Taniguchi b. Hitoshi and Tsujie masao Hosokawa masahiro fujita, Shigeyuki sasaki.

a. Department of otolaryngology, keiyukai Sapporo hospital, sapporo Japan

b. Department Of Surgery, keiyukai Sapporo hospital, sapporo, japan

c. keiyukai Institute of Clinical and surgical pathology Sapporo Japan

d. Department of medical sciences, Health Science, university of Hokkaido Ishikari – tobetsú Japan.

3. Genetic etiology of oral cancer Johar Ali, Bibi Sabiha, Hanif ullah jan, Syed Adnan Haider, Abid Ali Khan Saima S. Ali.

4. Mouth Self - examination as a screening tool for oral cancer in a High- Risk group of patients with fanconi anemia. camila pinheiro furquim DDS, Allana pivovar, DDS Laura Grein cavalcanti DDS, MSc, Renata fuentes Araujo, DDS, Msc, Carmen maria Sales Bonfim, MD Msc DDS and Cassius Carvalho Torres, pereira, DDS, PhD.

5. Oral cancer in India: An epidemiologic and clinical review R. Sankaranarayanan, MD, kerala, India.

6. Epidemiology and prevention of oral cancer: C. La Vecchia A, Tavani, S. Franceschi, F. Levi, G. Corrao, and E. Negri.

7. Journal of cancer policy Early detection and diagnosis of oral cancer: strategies for improvement. P. J. Ford a-b, C. S. farah a-b

a. The university of Queensland School of Dentistry, 200 Turbot st, Brisbane, QLD, 4000 Australia

b. UQ centre for clinical Research Herston, QLD, 4029, Australia.

8. Brazilian Journal of otorhinolaryngology prevalence of oral and oropharyngeal. Human papillomavirus infection in Brazilian population studies: a systematic review Leandro Luongo de Matos, Giuliana Angelucci Miranda, Claudio Roberto Cernea.

9. Detection and treatment of early cancers of the oral cavity Crispian Scully, R.Peter Ward – Booth

10. Paiin complaint as the first symptom of oral cancer: A descriptive Study Linneu cuffari, DDS, MES, Jase Tadeu Tesseroli de Siqueira, DDS, PhD, Katia, Nemr, PhD, and Abrao Rapaport, MD, PhD, Sao Paulo Brazil. Hospital heliopolis and hospital das clinica of university of sao paulo.

11. Oral Oncology Advances and applications of oral cancer basic research Sabrina Daniele da Silva, Alfio Ferlito, Robert P. Takes, Ruud H Brakenhoff, Mev Dominguez, Valentin Julia A Woolgar, Carol R Bradford, Juan P. Rodrigo, Alessandra Rinaldo, Michael P. Hieru, Luiz Kowalski.

12. Potential biomarker for the cytologic diagnosis of Oral squamous all Carcinoma Wei-Chung Vivian Yang, Ho-Ren Chung, Jia-Ya-Wu, Chen Yi, Duen-Jeng Wang, Sheng Yang Lee.

13. Treatment of Oral Squamous Cell Carcinoma With Simultaneous Chemotherapy and Radiation: Results and Surgical Implications

a. Scott earle, md,* david j. Adelstein, md, t catherine vlastou, md,* Vishwa m. Sharan, md, 5 and a. Thomas indresano, dmd.

14. Oral mouth cancer Pedro Diz Dios*, Juan seoane Lestón.