

**COVIDIFIED ORAL CANCER -COVID 19 WAVES ON ORAL CANCER****Dr Rajalakshmi.G**

Research Scholar

Amrita Vishwa Vidyapeetham, Amrita Institute of Medical Sciences, Kochi

Abstract

Cancer is accountable for 9.6 million apparent deaths worldwide but amid pandemic may further intensify the mortality rates. Recent data projected an increase of about 20% in mortality rates is anticipated. Oral cancer is a grave and growing problem across the globe but is focused now to the COVID-19 catastrophe. In Asian countries like Sri Lanka, India, Pakistan, and Bangladesh, it is the most common cancer in men. Approximately 1,00,000 cancer cases going undiagnosed per month in India as in a pandemic, other health issues may be deserted by the community and flouted by medical domains. During lockdown, all dental procedures were deferred and the panic of aerosol transmission still persists among the population. The socio-economic impact of Covid 19 may also refrain the patients from dental office. Oral health care providers have a vivacious stake in rapid detection of oral cancer when through opportunistic screening. Therefore, probability of oral cavity screening might be disrupted, and consequently diagnosis of malignant and/or potentially malignant lesions might be delayed, that certainly leads to a missed diagnosis. This review is an attempt to highlight the importance of oral screening and to create an awareness associated among the population and health care providers to shrink the incidence after pandemic.

Keywords: Oral Cancer, Opportunistic Screening, Covid 19, Pandemic, Mortality Rates.

Introduction

Oral Cancers are usually tailed by potentially malignant disorders that involves genetic changes which hampers or alters the functioning of oncogenes and tumor suppressor genes (TSG)¹. Thus, leading to over production of growth factors, cell surface receptors, transcription factors and intracellular messenger signaling¹ that may be clinically apparent as mucosal changes. These are alerting peril and extant an opportunity for early detection and prevention of malignant transformation.

The etiopathogenesis of oral cancer is intricate, sundry and multifactorial. The most clearly allied risk factors are smoking, pan chewing, trauma and alcohol, but a generous proportion of patients develop oral cancers without such exposures, emphasizing on further risk factors like genetic susceptibility and oncogenic viruses^{1,2}. Many oncogenic virus species like Human papilloma virus, Epstein Bar, HIV etc. have been identified in oral carcinogenesis². Literatures epitomize the role tumor microenvironment in modulating the biological behavior of tumor cells^{3,4} and one of the most important modulator is functional renin-angiotensin system (RAS). It is one of the frequently altered oncogene in oral cancers. Angiotensin II (Ang II), a key component of RAS has identified in oral carcinogenesis process^{3,4,5}.

Corona Virus Disease (COVID-19) is a viral infection which outbreak in Wuhan, China in December 2019 and phylogenetic analysis based on the viral genome, discovered 2019-nCoV also belongs to the β -CoV alike to SARS-CoV & MERS-CoV. World Health Organization declared Covid 19 as pandemic on March 2020

Angiotensin Converting Enzyme 2 (ACE 2) is recognized as target receptor for COVID-19 virus. It is present on cell surfaces⁶ and supposed to be the access of virus into the host cells. ACE 2 has been reported to be seen in several sites of oral cavity and hence, oral cavity may be a potential site for the COVID 19 virus^{6,7}. ACE2 receptors have also detected on lymphocytes within the oral mucosa; similar to organs of the digestive system and the lungs. CoVs are positive-stranded RNA virus and electron microscopically a crown-like appearance as the envelope contains spike of glycoproteins⁸. Through the ACE2 cell receptor, virus enter the host cell and attaches with receptor through the S-spike present on the viral surface. The coreceptor for the corona virus is ACE2 and captivately, ACE2 receptor is vastly expressed on epithelial cells of oral mucosa, mainly tongue⁶. So, this viral infection may lead to diminution in ACE2 cell receptors. Thus, causing reduction in obtainability of ACE2 if an oral cancer patient gets this virus infection^{7,10}. Thus promoting a protumoral effect mediated by Angiotensin II due to its increased concentration. This nurtures a query towards a relationship between oral cancer and COVID-19, which opens up a door for extensive cohort studies.

Digression in capitals to battle Covid 19 has widened the disparity in cancer care delivery associated with scarce infrastructure that cannot handle the current and near future cancer burden. The impression of the pandemic on oral cancers are unpredictable and still persist for months to years. So, it is high time to take measures on tackling the challenges of the pandemic scenario to assure the best possible treatment modality. The screening of Covid affected potentially malignant patients should be done effectively for monitoring and managing them from malignant transformation. The data of diagnosed potentially malignant disorder patients to be retrieved from clinical registry and proper follow up to be done. Similarly, oral cancer patients may have an ill-fated upshot if left untreated¹¹, so novel approaches to be anticipated for continuing care for these patients. Telecommunication can be one of the finest



tactics to grab the situation¹²but in Indian rural areas, digitalization is far beyond hence a different approach should be deliberated. A task force including a dental surgeon, auxiliary health care providers, social workers, faculty of community dentistry and a psychological counsellor to be made with all protocols to reduce the risk of COVID 19 transmission to the team members. These team should be focused and trained to handle the following three groups of patients (a) Oral Cancer Patients whose treatment got interrupted due to the pandemic (b) Directing the diagnosed oral cancers/precancers to the oncology department (c) Follow up of habit associated patients who are at risk. There should be a structured component to overcome COVID-19 pandemic scenario for screening of pre cancer and cancer for the benefit of entire mankind.

Conclusion

This literature ultimately provides the need on modifications in Oral Cancer diagnosis and management, thereby reducing the burden of Oral Cancers in post Covid era. It also provides a possibility of link of Covid 19 and Oral Cancers which requires large extensive cohort studies. It also brings attention of the community, policymakers, and public health care providers to adapt and plan the diagnosis and treatment modalities of oral cancer with foremost ethical accountability if similar enormity happens in future.

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