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Mini Review

Diagnosis of HPV Associated Oral Cancer –an Oral Physician Perspective

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Abstract

In the era of modern medicine despite availability of advanced treatment modalities for the oral cancer the survival rates are not improving dramatically, one good reason could be the diagnostic challenge. To complicate the situation further there are other uncommon aetiologies like HPV associated oral cancer which are increasing in number, for making an oral physician proficient in differentiating them from conventional oral cancer key features including the risk factors and clinical features are to be known.

Keywords: HPV Associated Oral Cancer; Oral Physician

Introduction

Head and neck squamous cell carcinoma (HNSCC) are the sixth most common cancer [1]. Despite the novel diagnostic and therapeutic methods implemented in oncology, the cancer incidence has been growing, making the disease an important public health problem Globally [2]. In the past decade, HNSCC associated with known risk factors, such as tobacco, alcohol, and poor oral hygiene [3]. This conventional form has been declining in incidence on few countries [4]. In contrast, infection with HPV has been shown to be a new risk factor for HNSCC, more specifically the base of tongue, soft palate, tonsils, and pharyngeal wall in younger adults [5]. The prevalence of HPV associated HNSCC has been increasing at epidemic proportions in multiple populations in western countries, which further cautions us to know the risk factors and clinical features of this HNSCC, so that early diagnosis and better treatment is delivered to patients.

Discussion

Over the last 20 years it has become evident that head and neck cancers are etiologically heterogeneous, Although the majority is caused by tobacco and heavy alcohol consumption [6,7]. It has been an interesting finding in recent past in the United States, despite declines in tobacco use for the last 4 decades, the number of oro-pharyngeal cancers diagnosed annually has increased each year attributable to high-risk HPV infections [8]. Sexual behaviour is the major risk factor associated with oral HPV infections and related oro-pharyngeal cancer [9].

It is found in particular an individual's lifetime number of oral sexual partners increases risk of oral HPV associated oral cancer [9]. Other reported risk factors include vaginal sex, a history of genital HPV infection, age at sexual debut less than or equal to 18 years of age, HIV infection and marijuana use [10]. A study by D'souza., *et al*. Has shown that the risk for oral HPV infection among men and women based on their smoking status and Number of oral sex partners. Men who were current smokers with more than 5 lifetime oral sexual Partners had an 'elevated risk' for any oncogenic HPV subtype (prevalence = 14.9%) and for subtype HPV 16(4.1%). Men who did not smoke and had greater than or equal to 5 partners or smoked and had 2 - 4 partners had 'medium risk' for any oncogenic HPV subtype (7.3%) and HPV 16 (2.2%) [11]. Finally, oncogenic Oral HPV subtypes were 'low' among men and women with ≤ 1 lifetime oral sexpartner (2.8%and0.7%, respectively) [11].

Several studies show that young individuals seem to be at greater risk for developing HPV positive oro-pharyngeal cancers, with one study reporting a higher percentage of cases in young men [12]. The young age of the risk group may be a result of changes in sexual behaviour such as earlier onset of sexual activity and increased oral practices. These patients also exert better Responses to intervention therapy and have fewer recurrences as compared to age-matched patients with HPV-negative HNSCCS [13].

The patients with HPV oral cancer manifest few of the following clinical features which in contrast to conventional HNSCC [14,15].

- Commonly seen at a younger age [peak bimodal distribution in 3rd and 5th decades of life].
- persistent mass or swelling in the neck.
- The lesions are located more frequently in soft palate, base of tongue, and tonsils.
- They are seen affecting patients without history of alcohol and tobacco consumption.
- Male predominance.
- Associated with undifferentiated tumour.
- Presenting with sensitivity to treatment with chemotherapy and radiotherapy.
- Dysphagia, otalgia and trismus are common symptoms.
- High rate of distant metastasis.
- They have a better prognosis compared with non–HPV head and neck cancers despite the fact that they often present with regionally advanced nodal involvement.
- Rates of second primary malignancies of the head and neck are low among this population (11% vs 20%) compared with other head and neck cancers.

Conclusion

Earlier the diagnosis better is the treatment, thus emphasizing the need of knowing the newer variant the HPV associated HNSCC which is having array of risk factors and manifestations, by which an oral health care professional can diagnose the oral cancer increasing the survival rates by prompt treatment.

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