Human papillomavirus (HPV) involvement in the carcinogenesis of oropharyngeal cancer

Human papillomavirus (HPV) has for some time been suggested to be involved in the carcinogenesis of oropharyngeal cancer. The HPV is a small, circular double-stranded DNA virus that was first identified in 1949. Up till now, over 100 different HPV types have been identified. The HPV subtypes are divided into high-risk and low-risk HPV based on their malignant potential. Approximately, 15 high-risk subtypes are known but only HPV subtypes 16, 18, 31, 33, and 35 have been identified playing a role in the development of oropharyngeal head and neck cancer. The HPV 16 is the most common type detected in oropharyngeal cancer accounting for 90 to 95% of the HPV-positive tumors. The International Agency for Research on Cancer (IARC) now recognizes HPV as a risk factor for oropharyngeal cancer, and accumulating molecular and epidemiological data now show that high-risk types of HPV are responsible for a subset of oropharyngeal cancer. Majority of the HPV-positive oropharyngeal cancers lack association with the traditional risk factors, such as tobacco and alcohol. Alike HPV-associated cervical cancers, HPV-positive oropharyngeal cancers are also sexually transmitted. It is assumed that HPV infection precedes the development of HPV-positive head and neck cancers, and the presence of high-risk HPV infection on the oral mucosa and seropositivity increases the risk of development of head and neck cancers. Therefore, risk factors for oral HPV infection are likely to be risk factors for HPV-positive head and neck cancers.

Biography

Kamran Habib Awan is a renowned international speaker in the field of oral medicine and diagnosis. He completed his Bachelors in Dental Surgery with first division from Karachi University in 1997. Dr. Awan was awarded his PhD in oral medicine from Kings College, London in 2011. His study was the first ever to evaluate number of diagnostic methods in comparison to surgical biopsy (gold standard). He serves as an advisory board member for a number of reputed journals. He also has numerous publications to his name. His research interests include oral cancer and diagnosis. Dr. Awan currently serves as an associate professor in the Roseman University of Health Sciences, Utah, United States.

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