

Prevalence of Human Papilloma Virus 16 and 18 in Thai Patients Suffering from Oral Cavity and Oropharyngeal Squamous Cell Carcinoma

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Background/Objective

The incidence of oral cavity and oropharyngeal squamous cell carcinoma is common in several regions of the world. The primary risk factors associated with this cancer include betel nut chewing, tobacco use, alcohol consumption and human papilloma virus infection. This study determined the prevalence of human papilloma virus (HPV 16 and 18) and evaluated the relationship between HPV infection, demographic data, clinical parameters and the occurrence of oral cavity and oropharyngeal squamous cell carcinoma.

Method

A total of 115 formalin fixed, paraffin-embedded (FFPE) and 61 fresh specimens of subjects at Rajavithi hospital, from August 2011 to September 2013, were collected. The detection of HPV 16 and HPV 18 was carried out by real time PCR technique.

Result

Four cases presented as positive for HPV 16 (3.5%), and only 1 case was positive for HPV 18 (1.7%). There was no association between oral cavity and oropharyngeal squamous cell carcinoma and oral hygiene, family history of cancer, betel nut chewing, tobacco chewing and genital warts. Only tobacco exposure (60%) and alcohol consumption (57%) were associated with oral cavity cancer risk. The prevalence of human papilloma virus (HPV 16 and 18) infection in oral cavity and oropharyngeal squamous cell carcinoma in this study was found to be low (4.35%).

Conclusion

Human papilloma virus (HPV 16 and 18) infection may not play an important role in these groups of Thai patients. This study confirmed a strong association between smoking and alcohol drinking with oral cavity and oropharyngeal squamous cell carcinoma.