

The HPV related oral squamous cell carcinoma revealed tumor site and age specificity, different from oropharyngeal cancer

Somjin Chindavijak MD¹, Suppaluk Jensesadatham MD¹, Ekapob Sangariyavanich MD¹, Anantnuch Sakapiboonnan MD², Wirote Lausoontornsiri MD³. ¹Department of Otolaryngology, ²Department of Pathology, ³Clinical Research Center, National Cancer Institute of Thailand, Bangkok, Thailand

Background:The incidence of oral squamous cancer in patients under 45 years of age in Thailand was increase from 10.5 per 100,000 in 1994 to 13.4 per 100,000 in 2000. The tumor behavior was known a difference between the groups of under and above 45 years of age which affected the outcome of treatment. Recently Human papilloma virus has gained interest in correlation with Head and Neck cancer which are noted to cause the oropharyngeal squamous cell carcinoma in the young patients. To understand more about oral cancer, we had conducted a retrospective analysis of clinical and biomarkers of the 47 Thai oral squamous cell carcinoma, based on age and HPV status.

Material and Methods Patients: Forty seven cases of oral cancer visited at otolaryngology department at National Cancer Institute Bangkok between October 2010 to September 2011 were included for analysis for sex, age, TNM stage, pathological diagnosis and site. All patients were interview of risk factor which were tobacco, alcohol, betel quid chewing and oral sex behavior. Patient with recurrence, second primary, history of previous cancer treatment were excluded. The Paraffin embedded tumors of the patients were performed for P53, EGFR and P16 immunohistochemistry. The PCR for HPV 16 were confirmed for HPV infected tumor. **Result:** there is a higher incidence of HPV infection in the older age group (17.5%) than the younger age group (0%), for the risk factor, the oral sex behavior was statistically significant difference between the groups (57.1% vs 15% for younger and older group respectively $p=0.002$) but not for smoking and alcohol drinking (42.9% vs 60%, 71.4% vs 77.5%).

Conclusion: There is a markedly difference of p16 positive oral cancer behavior between the younger and older age group when compared with oropharyngeal cancer. The HPV positive tumor incidence was higher in older age and also indicated a site specific feature regardless other factor and tumor biomarker.