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Prevalence of *Human Papillomavirus (HPV) 16 & 18* and *Epstein-Barr virus (EBV)* in oral squamous cell carcinoma in Rajavithi hospital, Thailand

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Background: Oral cancer is the sixth most common cancer worldwide with high morbidity and mortality in both Western and Asian countries. Several studies have shown the association of oncogenic viruses. Several studies indicate co-infection with *Human papillomavirus (HPV)* and *Epstein-Barr virus (EBV)* in Oral squamous cell carcinoma.

Objectives: To determine the prevalence of HPV 16&18, EBV and their co-infection in oral squamous cell carcinoma in Rajavithi hospital, Thailand. The correlation between viral infections, demographic data, and clinical parameters was also investigated.

Methods: Informed consents were obtained from Oral squamous cell carcinoma patients. Questionnaire and physical examination were obtained and gathered for demographic data and clinical parameters. A total of 72 specimens from patients at Rajavithi hospital, between August 2011 and September 2013 were collected. The detection of HPV 16 & 18 and EBV was carried out by Real-time PCR technique. (HPV16&18 and EBV Real-time PCR kit, CE Marked, ZJ Bio-Tech).

Results: Of All 72 samples, 4.16% (3/72) were HPV positive. The HPV type 16 was detected in 4.16% of all samples (3/72) but HPV type 18 was not detected (0/72). EBV DNA was detected in 36.11% (26/72). HPV16 and EBV co-infection were detected in 2 cases (2.77%). There was no association between HPV infection and EBV infection.

Conclusion: The prevalence of oncogenic virus infection in oral squamous cell carcinoma in this study was found to be high (40.27%) especially EBV infection. Therefore, EBV infection may be act as an important etiological risk factor of OSCC and the mechanism of HPV/EBV co-infection in Oral squamous cell carcinoma may be further studied.

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