

# SURVEY OF HUMAN PAPILLOMAVIRUS PREVALENCE IN THE ORAL CAVITY OF THAI DENTAL PATIENTS

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**Abstract.** Human papillomavirus (HPV) is associated with oral cancer but it is unclear whether the normal oral cavity is a reservoir for this virus. We aimed to determine the prevalence of HPV in the oral cavity of Thai dental patients in order to better understand the risk for oral cancer in this patient population. We randomly recruited dental patients from those attending the Faculty of Dentistry Dental Clinic, Mahidol University. Inclusion criteria for study subjects were dental patients aged 15-79 years with no oral pathologic lesions who agreed to participate in this study. Exclusion criteria were those who had serious systemic diseases, oral soft tissue pathological lesions, used antibiotics or antiseptic mouth rinse during the 7-day period before sample collection or had problems with communication. A minimum sample size was calculated and determined to be 180 subjects. Oral mucosal cell samples were collected using a soft bristle toothbrush and examined for the presence of HPV using polymerase chain reaction (PCR) analysis for the presence of HPV DNA. HPV isolates were then typed using DNA sequence analysis. Selected subject characteristics were recorded and associations between these characteristics and the presence of HPV was determined. A total of 210 subjects were included in the study; 74% females. The mean ( $\pm$ standard deviation) age of study subjects was 31.7 ( $\pm$ 14.1) (range 17-72) years. Of the 210 subjects, 2 (1%) had a positive PCR test for HPV. The typing of both samples was HPV 18. On analysis, only male gender (both positive subjects were male) was significantly ( $p = 0.017$ ) associated with HPV infection. The prevalence of HPV in our study subjects was low. Further studies involving larger numbers of subjects from a variety of populations are needed to determine whether the oral cavity can act as a reservoir for HPV.

**Keywords:** Human papillomavirus, oral cavity, Nested PCR, Thai dental patients

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