Study of the Human Papillomavirus Infection in Oral Mucous with Betel Nut Chewing Habit

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ABSTRACT

The purpose of this study was to understand the relationship between 20 specimens of health mucosa and 25 specimens of premalignant lesion or oral submucous fibrosis（OSF）and HPV-16 and HPV-18 infection by using polymerase chain reaction method. The results showed that HPV-16 infection rate of health mucosa was 5%, and the HPV-18 infection rate is also 5%. The premalignant lesion or oral submucous fibrosis（OSF）patients were divided into one group with betel nut chewing habit and the other group without betel nut chewing habit. HPV-18 DNA could be identified in 4 out of 21（21%） premalignant lesion or oral submucous fibrosis（OSF）specimens from patients with betel nut chewing habit and in 0 out of 6（0%） premalignant lesion or oral submucous fibrosis（OSF）specimens from patients without betel nut chewing habit. The overall HPV-18 infection rate in premalignant lesion or oral submucous fibrosis（OSF） specimens was 16%（4/25）. There was no significant difference in HPV-18 infection rate between premalignant lesion or oral submucous fibrosis（OSF）specimens and health mucosa specimens. HPV-16 DNA could be detected in 6 out of 19（31.6%） premalignant lesion or oral submucous fibrosis（OSF）specimens from patients with betel nut chewing habit and in 1out of 6（16.7%） premalignant lesion or oral submucous fibrosis（OSF）specimens from patients without betel nut chewing habit. The overall HPV-16 infection rate in premalignant lesion or oral submucous fibrosis（OSF）specimens was 28%. There was a significant difference in HPV-16 infection rate between premalignant lesion or oral submucous fibrosis（OSF）specimens either from patients with betel nut chewing habit or from patients without betel nut chewing habit and health mucosa specimens. The results suggest that HPV-16 may play a role in oral carcinogenesis in patients with betel nut chewing habit. Further studies are needed to prove these hypotheses.

Keywords : premalignant lesion ; oral submucous fibrosis ; OSF ; human papilloma virus ; HPV-16 ; HPV-18

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