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DETECTION OF HUMAN PAPILLOMAVIRUS DNA SEQUENCES IN ORAL LESIONS USING POLYMERASE CHAIN REACTION

M. R. Zarei, A. Moradie, R. Hamkar, S. Mohammadalizadeh, G. Chamani, N. Alizadeh, S. Kakooei B. Eslami

Abstract:

The purpose of the present study was to estimate the frequency of HPV DNA in four groups of oral lesions, including oral squamous cell carcinoma. Sixty paraffin-embedded oral tissue samples were examined for the presence of HPV DNAs using the PCR technique. These specimens were obtained from patients with oral squamous cell carcinoma (OSCC), leukoplakia, oral lichen planus (OLP), and pyogenic granuloma (PG). Consensus primers for L1 region (MY09 and MY11) and specific primers were used for detection of HPV DNA sequences in this study. we detected HPV DNA in 60% (9 out of 15) of OSCCs, 26.7% (4 out of 15) of leukoplakia, 13.3% (2 out of 15) of OLPs, and 6.7% (1 out of 15) of PGs. Statistical analysis showed that the prevalence of HPV in OSCC was significantly higher than other groups ($P < 0.05$). The frequency of HPV-16 and 18 detection in OSCC samples were 40% and 20%, respectively. The prevalence of these high risk HPVs was significantly higher in OSCC group ($P < 0.05$). The results of the present study show a successive increase of detection rate of HPV-16 and 18 DNAs from low level in samples of pyogenic granuloma and non-premalignant or questionably premalignant lesions of OLP to premalignant leukoplakia and to OSCC.

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