

**DETECTION OF ONCOGENIC HPV AND EBV VIRUSES IN SALIVA FROM INDIVIDUALS
WITH HEAD AND NECK CANCER**

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ABSTRACT:

Head and neck cancer is the fourth most prevalent among a male population in the Brazil Northeast and have the high rates of mortality. The oncogenic HPV and EBV viruses be an important risk factor to development of head and neck cancer mainly in association with carcinogenic habits such as smoking, alcoholism and poor oral hygiene. The objective of this study was to determine the frequency of the major oncogenic viruses (HPV 16, 18, 31 as well as EBV genotypes A, B and LMP-1 variant) in saliva samples from patients with squamous cell carcinoma (SCC) active or with a history of SCC in the region of head and neck. Saliva were collected and submitted to DNA extraction with phenol chloroform and proteinase K (20 mgml⁻¹). PCR reactions with primers specific for human β -actin gene, HPV 16, 18, 31 and EBV, in duplicate, were performed. The total of 77 saliva samples, 67 amplified positively in the PCR with the human β -actin gene. A total of 19 saliva samples from volunteers with breast cancer or other sites, without lesion in the oral cavity was used as a control. DNA from oncogenic HPV 31 (18.86%) and EBV type A (20.75%) viruses were identified in saliva from 48 patients with lesions or with a history of carcinogenic lesion in the head and neck region. Frequencies of 10.53% of HPV-31 and 15.79% of EBV were detected in saliva of the control group. There was no significant difference between incidences of the control group and the group with SCC or history of SCC (Fisher's Exact Test and Incidence Rate). All EBV viruses were classified as genotype A and 4 samples were identified as LMP-1, a variant of EBV more oncogenic, which 2 samples were isolated from patients with SCC. Two patients with active SCC were co-infected with HPV-31 and EBV. No HPV-16 and 18 were detected in the saliva samples. Detection of the frequency and typing of oncogenic viruses in the at-risk population may be useful for the epidemiology and prevention of the head and neck cancer.

Keywords: oral cancer, HPV, EBV, saliva, PCR

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