

PREVALENCE OF HPV DNA IN CERVICAL CANCER IN SAUDI PATIENTS

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Background: Strong evidence supports a causal association between infection with the human papilloma virus (HPV) and cervical cancer. The goal of this study was to evaluate the prevalence HPV DNA in cervical cancer cases in Saudi patients.

Materials & methods: Based on a retrospective review of the archives of the pathology department at King Faisal Specialist Hospital and Research Center, 100 cervical cancer cases were identified. DNA was extracted by BIO-ROBOT (Qiagen) from paraffin embedded tissues selected after review by one pathologist. The extracted DNA was amplified by consensus primers GP5+-GP6+ PCR targeting L1 gene. PCR products were sequenced by ABI DNA sequencer. The generated viral DNA sequences were compared to the published HPV sequences at GeneBank using Basic Local Alignment Search Tool to identify the HPV genotypes.

Results: The distribution by histological diagnosis was as follows: 12 squamous carcinoma in-situ (CIS), 82 invasive squamous carcinomas (SC) and 6 endocervical adenocarcinomas (EA). 90% of cases were positive for HPV DNA with HPV 16 being the most common type (60%). Other HPV types identified included types 18 (10%), 45 (4%), 33 (3%) and others (13%). In EA, all 6 cases were positive for HPV DNA with 3/6 positive for HPV18.

Conclusion: Despite the belief that HPV is not highly prevalent in Saudi Arabia, the majority of cervical cancer cases contain HPV DNA with type 16 being the most common. Therefore, the proposed preventive benefit of any HPV vaccine will apply in the Saudi population.