

2ND BALKAN CONFERENCE OF MICROBIOLOGY

SEXUALLY TRANSMITTED DISEASES

A VARIANT OF A RARE HPV TYPE 66 IS THE THIRD MOST COMMON HPV TYPE AMONG MACEDONIAN WOMEN WITH CERVICAL LESIONS

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Epidemiological and molecular studies have implicated the human papilloma virus (HPV) as the main risk factor for the development of cervical intraepithelial neoplasia (CIN) and cervical cancer. Currently, more than 30 HPV types are known to infect the genital tract, of which at least 10 are associated with cancer. For many new and rare HPV types, the oncogenic potential is still unknown, due to the limited number of reports concerning their association with particular dysplastic and neoplastic lesions.

Here, we present the prevalence, association with cytological and histological cervical lesions and sequence variations of a variant of HPV type 66 among Macedonian women. The HPV was detected and typed by the MY09/MY11 PCR protocol, followed by ASO hybridization and restriction fragment length polymorphism (RFLP) analysis. Fifteen women or ~6% of the HPV positive Macedonian women with different cytological and/or colposcopic abnormalities were infected with this virus. Thus, this variant is the third most common HPV type, after HPV 16 (~20%) and HPV 31 (8%), among Macedonian women with cervical abnormalities. The RFLP pattern of the MY09/MY11 fragment of this variant differs from the published HPV 66 RFLP pattern in one restriction enzyme site (Rsa I). The DNA sequence analysis of this region showed only six nucleotide differences between this variant and the published HPV 66 MY09/MY11 sequence (< 2%), thus confirming that this virus is a variant of HPV type 66.

Cervical cytology was performed in all 15 women, while biopsy specimens were taken from eight women. The results from the cytology and/or histology showed that the HPV 66 was present in two women with normal cervical findings, one with non-specific chronic cervical inflammation, seven with low-grade SIL and five with high-grade SIL.

In conclusion, a variant of HPV 66 is a relatively common HPV type among Macedonian women with cervical abnormalities. It can be considered as an intermediate risk HPV type since it has been detected both in women with low and high grade SILs. The fact that some uncommon HPV types are relatively frequent in certain populations, such as HPV 66 among Macedonians, should be taken into consideration in a design of HPV detection protocol.