Studies on the prevalence of oncogenic HPV types among Lithuanian women with cervical pathology

Simanaviciene Vaida (LT) [1], Gudleviciene Zivile (LT) [2], Popendikyte Violeta (LT) [3], Ciaplinskiene Lina (LT) [4], Zilaitiene Birute (LT) [5], Zvirbliene Aurelija (LT) [6]

The aim of the study was to estimate the prevalence of 16 carcinogenic and potentially carcinogenic HPV types in the study group of Lithuanian women with various grades of cervical pathology in comparison to healthy women.

Materials and Methods: A total of 824 cervical specimens were investigated for HPV DNA: 547 specimens of women with abnormal cytology and 277 specimens of healthy women. Cytological diagnosis was confirmed by histology. For the detection of HPV infection, HPV DNA was amplified by PCR using three different primer systems. HPV DNA-positive samples were investigated for the presence of 16 HPV types (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 66, 73 and 82) by multiplex PCR.

Results: HPV DNA was detected in 67.6% of specimens collected from women with abnormal cytology and 24.2% of specimens collected from healthy women. The frequency of HPV-positive specimens correlated with the severity of cervical pathology: it ranged from 50.0% in ASC to 80.6% in cervical cancer. In cases confirmed by histology the frequency of HPV-positive specimens ranged from 68.6% in CIN I to 89.2% in CIN III/CIS. The most common HPV type was HPV16 (detected in 42.3% of HPV-positive specimens) followed by HPV31 (10.1%), HPV33 (8.2%) and HPV56 (5.7%). HPV18 was identified in 4.1% of HPV-positive women with various grades of cervical abnormalities and in 11.3% of those with cervical cancer.

Conclusions: Among studied Lithuanian women, HPV16 was the most common HPV type identified in both groups of women either with normal or abnormal cyto-histology. High prevalence of other high-risk HPV types such as HPV31, HPV33 and HPV56 was demonstrated. In contrast, the frequency of HPV18 was lower as compared to other countries.