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## High risk human Papillomavirus in anal samples of women with cervical abnormalities

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**Background:** Cervical cancer (CC) is the second most common cancer in women worldwide. Human papillomavirus (HPV) infection is recognized as a necessary event to develop CC. Other malignancies have been associated with the presence of HPV; in anal neoplasias HPV have been identified in over 50% of cases. Recent studies suggest that women with squamous intraepithelial lesion (SIL) or CC are at increased risk for anorectal malignancies. The aim of this study was to determine the prevalence of HPV 16, 18, 58 and 45 in cervical and anal samples of women with cervical abnormalities.

**Methods:** Women examined by colposcopy were included, cervical and anal cytological samples were taken for virology analysis and a biopsy for histopathology from cervical tissue. The quality of the sample was assessed by amplifying a globin gene. The presence of specific HPV was determined using a nested polymerase chain reaction assay with specific primers for genotypes 16, 18, 58 and 45 as reported by Sotlar (2004).

**Results:** In total, 262 women were included in this study, 52% live in rural area and 58% in urban area; the age mean was 38.2 years, ranging from 16 to 78 years; 57% referred Pap smear history, age mean of first intercourse was 18 years, ranging from 13 to 35 years, 90% referred <3 sexual partners. Of 262 women studied 45% had HPV in cervical samples and 35% in anal samples; 21% of them were HPV positive in both anatomical sites, in 61% the same genotype was detected in cervix and anus. About HPV positive women in anus, 73.3% of them had low grade SIL, 13.3% high grade SIL, 4.4% invasive cervical cancer, and 8.9% are waiting for results. Of all women with HPV in anal region 83% had single infections and 17% dual. The frequencies of the different genotypes were: 16 (23%), 18 (13%), 58 (37%), 45 (10%), 16 and 58 (8%), 16 and 18 (1%), 16 and 45 (2%), 18 and 58 (5%) and 45 and 18 (1%).

**Conclusion:** Infection with high-risk HPV in the anal region of women with SIL is a frequent event. The clinical significance of these findings is unknown, it is necessary to conduct longitudinal studies to assess the risk of developing anal lesions in these women.

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