

ABSTRACT

Background: More than 90 % of anal cancers are caused by high-risk human papillomavirus (HR HPV) infection and a history of cervical intraepithelial neoplasia (CIN) and cervical cancer is established as possible risk factor. The aim of this study was to demonstrate relationship between anal and cervical HPV infection in women with different grades of CIN and microinvasive cervical cancer and to determinate potential risk factors for concurrent cervical-anal HPV infection.

Methods: A total of 272 women were enrolled in the study. The study group included 172 women who underwent conization for high-grade CIN or microinvasive cervical cancer. The control group consisted of 100 women with non-neoplastic gynecologic diseases or biopsy-confirmed CIN 1. All participants completed a questionnaire detailing their medical history and sexual risk factors and were subjected to anal and cervical HPV genotyping using Lynclear array test (Roche).

Results: Cervical, anal, and concurrent cervical-anal HPV infections were detected in 82.6 %, 48.3 % and 42.4 % of women in the study group, and in 28.0 %, 26.0 % and 8.0 % of women in the control group, respectively. The prevalence of the HR HPV genotypes was higher in the study group and significantly increased with the severity of cervical lesion. Concurrent infections of the cervix and anus occurred 5.3-fold more often in the study group than in the control group. Any contact with the anus was the most significant risk factor for development of concurrent HPV infection.

Conclusion: Concurrent anal and cervical HR HPV infection was found in nearly half of women with CIN 2+. The dominant genotype found was HPV 16. Any type of sexual contact with the anus was shown as the most important risk factor for concurrent HPV infection.

KEY WORDS: HPV, CIN, cervical infection, anal infection, anal cancer

