

CLINICAL STUDY

Occurrence of cervical intraepithelial neoplasia in generally healthy women with exophytic vulvar condyloma acuminata

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Abstract

Aim. To disclose possible association between exophytic vulvar condyloma acuminata and cervical intraepithelial neoplasia in generally healthy, sexually active women.

Methods. This retrospective study included 74 patients (study group) who were referred for laser vaporization therapy of exophytic vulvar condyloma acuminata, and 88 asymptomatic volunteers without evidence of exophytic vulvar condyloma acuminata (control group) who were referred for screening Papanicolaou (Pap) test cervical evaluation including colposcopy. The diagnosis of cervical intraepithelial neoplasia was based on Pap smear, colposcopy and/or biopsy.

Results. On Pap smear, atypical squamous cells of undetermined significance or low-grade squamous intraepithelial lesions were found in 10 (13.5%) women with exophytic vulvar condyloma acuminata and in 2 (2.3%) asymptomatic volunteers ($p < 0.05$). Cervical intraepithelial neoplasia was found in 8 women with exophytic vulvar condyloma acuminata and in none of the asymptomatic volunteers ($p < 0.05$).

Conclusion. An association was found between exophytic vulvar condyloma acuminata and abnormal Pap smear or positive cervical biopsy, in generally healthy women.

Keywords: CIN, condyloma acuminata, HPV

Introduction

Condyloma acuminata (genital warts) is the most common sexually transmitted disease in industrialized countries [1]. It is caused by human papillomavirus (HPV) and it produces significant morbidity. HPV types 6 and 11 were found in most genital warts [1]. These HPV types are not associated with high-grade cervical neoplasia [2], but they can cause minor degrees of cervical intraepithelial neoplasia which also result in morbidity both from fear and from over-treatment [1]. The true relationship between genital warts and cervical intraepithelial neoplasia is far from being completely elucidated. For example, in HIV-positive women, genital warts were described as a factor contributing to the development of cervical intraepithelial neoplasia (squamous intraepithelial lesions) [3]. The possibility of mixed infection with

several HPV types is well documented; in this case there is a possibility that women with vulvar condyloma are at high risk for cervical intraepithelial neoplasia.

This study was undertaken to find out whether there is an association between exophytic vulvar condyloma acuminata and cervical intraepithelial neoplasia in generally healthy, sexually active women.

Materials and methods

The study group comprised 74 women (aged 31.3 +/− 9.2 years) who were referred for laser vaporization therapy of exophytic vulvar condyloma acuminata at the cervical unit of Maccabi Health Services between June 1 1996 and November 30 2001. The control group comprised 88 asymptomatic volunteers (aged 41.1 +/− 13.6 years) who were referred for screening Papanicolaou (Pap) test without evidence of exophy-

tic vulvar condyloma acuminata. The age difference between the groups was significant statistically ($p < 0.05$). Inclusion criteria in the study group consisted of availability of a Pap smear and/or cervical biopsy that had been performed during the month preceding the referral, no present history of significant disease, and sexually activity. An exclusion criterion was a positive HIV test, and 1 woman was excluded. Colposcopy was performed before laser vaporization therapy to exclude cervical pathology. After the initial analysis, the women were followed up for a period of 18 months for development of cervical intraepithelial neoplasia, using Pap smear and/or colposcopy with biopsy. The inclusion criterion for the control group was sexually activity. A Pap smear and colposcopy were carried out for all volunteers, and biopsy was performed as required for women with suspicious cervical findings on colposcopy. Cervical intraepithelial neoplasia was classified in accordance with Bethesda System terminology [4].

The present study had 80% power to detect a 10% difference in the rate of cervical intraepithelial neoplasia (two-sided $\alpha = 0.05$) at the present sample size. Statistical analysis was performed by Student's *t* test or chi-square (χ^2) test as indicated. Significance was set at $p < 0.05$.

Results

Condyloma acuminata was vulvar in 59 (79.7%), perianal in 10 (13.5%) and unspecified in 5 participants (6.7%). On Pap smear, atypical squamous cells of undetermined significance (ASCUS) or low-grade squamous intraepithelial lesions (LGSIL) were found in 10 (13.5%) women with exophytic vulvar condyloma acuminata and in 2 (2.3%) asymptomatic volunteers ($p < 0.05$). No high-grade squamous intraepithelial lesions (HGSIL) were found on Pap smear. Cervical biopsy on colposcopy was undergone by 41 women with exophytic vulvar condyloma acuminata and 14 asymptomatic volunteers (Table I). Cervical intraepithelial neoplasia (CIN) was found in 8 women with exophytic vulvar condyloma acuminata and none of the asymptomatic volunteers ($p < 0.05$).

Table I. Participants' cervical biopsy results. The data are presented as number (percentage). The differences between the groups are statistically significant (chi square 30.7, $p < 0.001$).

Result	Study group (<i>n</i> = 74)	Control group (<i>n</i> = 88)
CIN2/CIN3	1 (1.4%)	0 (0.0%)
CIN1	8 (10.8%)	0 (0.0%)
No dysplasia	32 (43.2%)	14 (16.9%)
Not performed	33 (44.6%)	74 (84.1%)

CIN, cervical intraepithelial neoplasia.

Discussion

We assessed the prevalence of CIN in generally healthy women with exophytic vulvar condyloma acuminata and in asymptomatic volunteers. Mild CIN was found only in women with exophytic vulvar condyloma acuminata. These findings would be classified as LGSIL on Pap smear. The result probably reflects the fact that exophytic vulvar condyloma acuminata are caused by HPV types that are not involved in significant CIN [2]. The converse obtains in HIV-positive women, where genital warts were found to contribute to the development of CIN [3].

Most HPV infections are transient, and only women who harbor a persistent HPV infection are likely to develop a cervical lesion [5]. In general, type-specific HPV infection is cleared within 2 years [6]. During this period, a woman may become reinfected with a new HPV genotype [6]. Therefore, presence of a certain HPV type infection may be a risk factor for the presence of another HPV genotype. This could be the rationale for assessment of CIN for women with exophytic vulvar condyloma acuminata. Similarly, a previous study from Denmark demonstrated an increased prevalence of abnormal Pap smears in women with genital warts [7].

In conclusion, we are in agreement with the concept that women with exophytic condyloma acuminata are at very low risk for developing significant CIN. However, a routine Pap smear for women with exophytic condyloma acuminata is necessary, and women with abnormal findings should undergo colposcopy and biopsy. Although not directly addressed in our study, HPV typing might identify the specific subgroup of women with exophytic condyloma acuminata who might further benefit from colposcopy in addition to Pap smear [8,9].

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