

Research letter

Cervical intraepithelial neoplasia in women presenting with external genital warts

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A necessary cause of cervical cancer and cervical intraepithelial neoplasia (CIN) is cervical infection with high-risk types of sexually transmitted human papillomavirus (HPV).¹ HPV types 6 and 11, which are associated with external genital warts, are not strongly associated with CIN and cancer.² However, women with external genital warts may be at increased risk of harbouring high-risk HPV types.³ Women with genital warts attending STD clinics have been found to have a CIN risk up to 6 times higher⁴ than that in the general population.⁵ A prospective study involving women with genital warts revealed that CIN was common after 10 years of follow-up, even after many women had received initial treatment of their CIN.⁶ It has been hypothesized that external genital warts may be a marker of a relative deficiency in immune response.⁷

In view of the imperfect sensitivity of Papanicolaou screening⁸ and the poor interobserver agreement for the diagnosis of low-grade cytologic abnormalities,⁹ the need for colposcopy as an adjunctive test in women attending STD clinics has been raised.¹⁰ To determine whether colposcopy is warranted in women presenting with external genital warts at our STD clinic, we studied the ability of cervical cytology to detect histologically confirmed CIN grade 1 and CIN grade 2 or 3.

We conducted a retrospective audit of the charts of 64 consecutive women who presented with external genital

warts, all of whom had undergone colposcopy with directed biopsy and concurrent cytologic testing, as was the policy of our STD clinic from 1992 to 1995. Colposcopy records were available for each woman, and histology results in the chart were used as the reference standard for determining the accuracy of the cytology results. The Research Ethics Board of the Hamilton Health Sciences Corporation approved of the use of the chart audit results.

Information on patient characteristics, including sexual behaviour, were obtained from the charts where available. The median age of all 64 women was 22.5 years (interquartile range 19.5–25.5 years). Half (52% [24/46]) had postsecondary education, and 98% (46/47) were born in Canada. Chlamydial cervicitis, gonorrheal cervicitis and genital herpes had been recently diagnosed at the STD clinic in 13% (8/63), 2% (1/63) and 2% (1/63) of the women, respectively.

The cytology and colposcopy results are shown in Table 1. The sensitivity of any cytologic abnormality (i.e., the presence of atypical squamous cells of undetermined significance, low-grade squamous intraepithelial lesions or high-grade squamous intraepithelial lesions) for predicting any grade of CIN on histology was 39% (9/23, 95% exact confidence interval [CI] 20%–61%) and the specificity was 68% (28/41, 95% exact CI 52%–82%). The sensitivity of any cytologic abnormality for predicting high-grade lesions (CIN grade 2 or 3) on histology was 80% (4/5, 95% exact

Table 1: Comparison of cytology results against colposcopy and biopsy results for 64 women with external genital warts seen in an STD clinic

| Cytology result | Colposcopy and biopsy result; no. (and %) of women | | |
|--|---|------------------------------|----------------------------------|
| | Benign or no biopsy done <i>n</i> = 41 | CIN grade 1 <i>n</i> = 18 | CIN grade 2 or 3 <i>n</i> = 5 |
| Normal or benign cellular changes | 28 (68) | 13 (72) | 1 (20) |
| Atypical squamous cells of undetermined significance | 5 (12) | 2 (11) | 0 |
| Low-grade squamous intraepithelial lesions | 7 (17) | 3 (17) | 1 (20) |
| High-grade squamous intraepithelial lesions | 1 (2) | 0 | 3 (60) |

CI 28%–99%) and the specificity was 69% (41/59, 95% exact CI 56%–81%).

As was demonstrated in previous studies in STD clinics,^{4,11} we found a high prevalence (36%) of histologic cervical abnormalities among women with external genital warts. The use of repeat cytology in STD clinics has been suggested;¹² however, this strategy depends on the willingness and ability of women to return to the clinic for follow-up after receiving an abnormal cytology result.

Colposcopic examination of women with external genital warts may be warranted to assess the cervix properly, given the poor sensitivity of cytology for detecting any grade of CIN (39%) in the present study and the potential loss of women to follow-up. It may be important to detect even low-grade CIN in women with genital warts, since these women may be more likely to have prevalent or recurrent lesions⁶ or they may have concurrent STDs such as chlamydial infection, which has been linked to the development of cervical cancer.¹³ Our study was limited by the use of a small, select group of women, and the results may not be widely generalizable. A larger, prospective study could determine whether colposcopic examination of women with and without external genital warts in STD clinics, family practice or obstetrics and gynecology settings is warranted.

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