

Cancer of the vulva in a 25-year-old woman with VIN III and high-grade cervical SIL - case report

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Summary

Human papillomavirus (HPV) infection is associated with an increase in intraepithelial lesions of the genital tract which are often multicentric. Following is a presentation of a case of vulvar cancer in a young woman (25 years of age) with multiple vulvar intraepithelial neoplasia (VIN III) lesions, a high-grade squamous intraepithelial cervical lesion, and a HPV type 16 infection at high risk of oncogenic transformation. This case offers an opportunity to discuss the risk factors that may favor the appearance of these lesions in young women, and their clinical management, diagnosis, and treatment.

Key words: Vulvar cancer; VIN; High-grade SIL; HPV.

Introduction

Squamous cell carcinoma of the vulva presents with greater frequency in older women [1]. Nevertheless, in recent years an increase in the number of younger women under the age of 40 who present with cancer of the vulva appears to be associated with human papillomavirus (HPV) infection [2]. The presence of multicentric lesions in the lower genital tract also appears to be associated with HPV infection [3].

A case of vulvar cancer in a young woman (age 25) with multiple vulvar intraepithelial neoplasia (VIN III) lesions and a high-grade squamous intraepithelial cervical lesion is presented.

Case Report

A 25-year-old woman was referred to our hospital when she was found to have vulvar lesions suggestive of condylomas and cytology results indicating a diagnosis of a high-grade squamous intraepithelial lesion (SIL). She had a history of hepatitis A in childhood. Her gynecological and obstetric history included menarche at age 11 with regular menstrual cycles, a normal delivery, and a spontaneous abortion. She began to be sexually active at age 17, and at present she has a stable sexual partner. She had had no previous gynecological examinations.

Upon examination a 1.5 cm in diameter lesion suggestive of condyloma was observed on the lower third of the left labium majorum. Another cytological study was performed as well as a colposcopic examination of the cervix (the colposcopic image was punctuation), a colposcopically directed cervical biopsy and identification and microarray-based genotyping of HPV infection.

The cytology and cervical biopsy results confirmed the diagnosis of high-grade SIL, and a HPV type 16 infection was

detected. Preoperative tests were performed prior to a cervical cone biopsy and the patient was instructed to apply topical treatment to the vulvar lesion using 5% imiquimod cream (Aldara®). The results of preoperative tests were normal, and the patient was scheduled for a cone biopsy and excision of the vulvar lesion, which did not respond to treatment with imiquimod.

The result of the histologic analysis to the cervical cone biopsy was high-grade SIL (Figure 1) affecting the endocervical surgical margin, and the vulvar lesion was found to be a high-grade vulvar intraepithelial neoplasia (VIN III) (Figure 2) with in situ vulvar carcinoma and areas of microinfiltration of the stroma (Figure 3).

On postoperative examination, a residual lesion measuring 0.5 x 1 cm was observed in the fourchette. It was biopsied and the result of the histological analysis was VIN III.

The case was discussed by the tumor board and it was decided to widen the surgical margins of the vulvar lesion to include the VIN III lesion. A second cone biopsy was performed in order to rule out any residual lesion of the cervix.

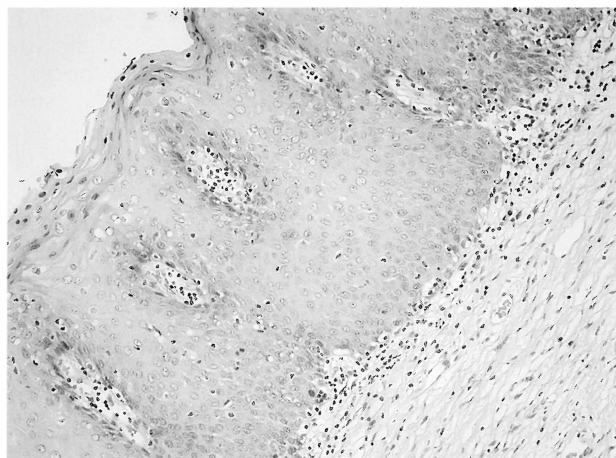


Figure 1. — High-grade SIL of the cervical cone biopsy.

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Fig. 2

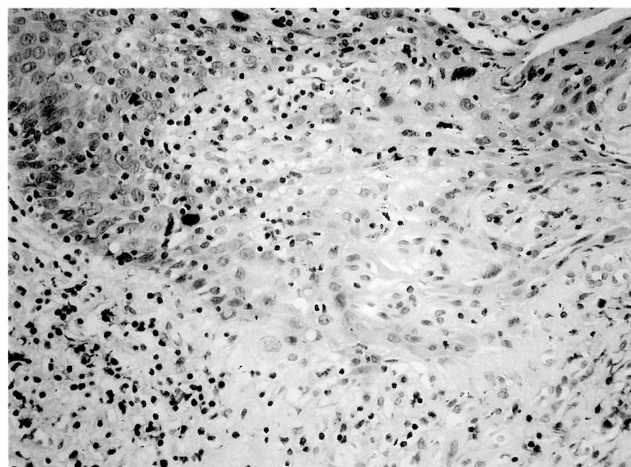


Fig.

Figure 2. — High-grade vulvar intraepithelial neoplasia.

Figure 3. — In situ vulvar carcinoma with areas of microinfiltration of the stroma.

The second cone biopsy and endocervical curettage were performed along with widening of the margins of the vulvar lesion and excision of the iodine-negative zone on the contralateral (right) labium major.

The patient's postoperative course was uneventful and she was discharged the following day.

The result of the histological analysis of the cone biopsy was low-grade SIL with HPV infection, and the endocervical curettage result was negative.

In the specimen taken from the left labium major where the in situ carcinoma with microinfiltrations was located, no residual infiltrating lesion was found, but there was an extensive area of VIN III and VIN I with negative surgical margins. In the right labium majorum a VIN III lesion and an extensive VIN II lesion affecting one surgical margin were observed.

Postoperative examination showed no residual vulvar lesions, and it was decided to have the patient return for periodic check-ups instead of widening the surgical margins yet again, since the patient was a young woman.

Discussion

Cancer of the vulva is infrequent, representing 3-5% of all gynecologic cancers [4], and of these few cases, only 5% are diagnosed in women under the age of 40 [2]. Recently, however, there has been an increase in the incidence of vulvar malignancies in young women associated with HPV infection. Other risk factors include the presence of VIN III lesions and tobacco use [1, 2, 5-7], all of which were present in the woman whose case is presented above.

During the past ten years there has been a 50% increase in the incidence of VIN [8]. Some studies of large samples have reported a decrease over the past 30 years in the average age at presentation of VIN, from 52.7 to 35.8 years of age [9].

This increased incidence is associated with a rise in HPV genital infections at high risk for oncogenic transformation, especially HPV 16 [10, 11] the genotype isolated in this case.

It is important to biopsy any lesion suggestive of condyloma that fails to respond to treatment [12] even in young women, as in this case, since it may be VIN or occult vulvar cancer.

VIN III is multifocal, appearing in different areas of the vulva in up to 81% of cases as reported in some studies [11], and may be associated with other precancerous lesions of the genital tract, as occurred in the case presented here.

The diagnosis of multicentric lower genital lesions is not infrequent. Up to 4.4% of women referred for squamous intraepithelial lesions of the cervix (SIL) [13] may also have VIN and VAIN (vaginal intraepithelial neoplasia), and up to 66% of women presenting with VIN III may also have SIL or VAIN [11]. The most frequent association (90%) is found between SIL and VIN, and between SIL and VAIN [13].

Young women presenting with high-risk HPV infection have the highest incidence of multicentric lesions of the lower genital tract [14].

A diagnosis of lower genital tract multicentric intraepithelial lesions is also associated with a high percentage of residual lesions following surgery, and with recurrences [13], as in the case presented above, in which the margin of the cone biopsy was positive, as was the margin of the VIN III resection.

Multifocal VIN is observed more frequently in young, sexually active women infected with high-risk oncogenic strains of HPV [14]. These patients require close follow-up over a long period in order to detect possible recurrences and to treat them as early as possible. Since these women are young, treatment should be as conservative as possible.

In the treatment of VIN III, excision with wide surgical margins [15] is preferable to extensive excisions such as cutaneous vulvectomy, since in as many as 14.2% of cases, no residual lesion is found in the excised tissue [16].

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