VULVAR INTRAEPITHELIAL NEOPLASIA COEXISTING WITH NONNEOPLASTIC EPITHELIAL DISORDERS OF THE VULVA

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ABSTRACT

Objective: To assess the frequency of vulvar intraepithelial neoplasia (VIN) adjacent to the nonneoplastic epithelial disorders (NNEDs) of the vulva.

Methods: Seventy eight patients with the diagnosis of vulvar NNEDs were reviewed retrospectively in respect to their coexistence with VINs, treatment options and follow-up reports.

Results: The rate of VIN coexisting with vulvar NNEDs was 7.7% (6 of 78 patients). One of these (17%) had been associated with cervical intraepithelial neoplasia 1. The age of those with vulvar NNEDs were similar to the age of those with VIN and vulvar NNEDs. Treatment options for VINs were skinning vulvectomy or laser therapy. None of the patients had recurrence during the mean follow-up period of 15.5 months.

Conclusion: VINs, which have a substantial risk of progressing to carcinoma, may not infrequently coexist with NNEDs of the vulva. Therefore, NNEDs of the vulva must be followed carefully with frequent colposcopic examinations and biopsies if new lesions are recognized.

Key Words: Nonneoplastic epithelial disorders of the vulva, vulvar intraepithelial neoplasia

INTRODUCTION

The literature includes a variety of complex terms, such as leukoplakia, kraurosis, senile vulvitis, causing considerable confusion regarding terminology applied to white lesions of the vulva. To resolve this issue, the International Society for the Study of Vulvar Disease (ISSVD) provided the first formal classification addressing two problems in vulvar terminology: the vulvar dystrophies and the intraepithelial neoplastic lesions (1). After considerable dispute on this classification, a new classification of vulvar nonneoplastic epithelial disorders (NNED) was proposed which represented a functional classification and has been accepted by the World Health Organization (2). This new classification has placed all intraepithelial squamous atypias under the topic of vulvar intraepithelial neoplasia (VIN). When both nonneoplastic and neoplastic epithelial disorders of the vulva are encountered, they should be reported separately according to the new classification, eg: lichen sclerosus (LS) with VIN 1, 2, or 3. The patients with vulvar NNEDs are reported to be at risk for the development of dysplasia (3,4) and dysplasias carry a significant risk of progressing to squamous cell carcinoma (5,6).

The aim of this study was to give information about the frequency of VIN adjacent to NNED of the vulva as defined by the 1987 ISSVD criteria and to present our preliminary results from the follow-up of patients with VIN.

MATERIALS AND METHODS

The study group consisted of patients who were diagnosed to have vulvar NNEDs at the Department of Obstetrics and Gynecology, Başkent University School of Medicine from September 1994 to December 1998.

A medical history was compiled for each patient and followed by a clinical examination of the vulvoperineal region using a colposcope. Papanicolaou smears were also taken. Five per cent acetic acid solution and/or (Received 21 February, 1999)
1% toluidin blue were applied to the vulvar skin to enhance the visualization of the pathologic sites. Direct biopsies were performed on suspected areas in all patients. In addition, the vagina and cervix were examined colposcopically in cases reported to have VIN.

The samples collected for histologic analysis were fixed in 10% buffered formalin and then examined by the Department of Pathology. All cases were diagnosed histologically according to the criteria proposed by the ISSVD (2).

Medical treatment was performed by administering 0.1% betamethasone valerate to the patients with squamous cell hyperplasia (SCH), and 0.05% clobetasol propionate to patients with lichen sclerosus. Surgical treatment as laser evaporation or skinning vulvectomy was preferred for patients with VIN.

After the medical or surgical treatment, all patients were followed up regularly with colposcopic examinations.

Statistical analyses were performed with chi square test.

RESULTS

The subdivisions of the 78 vulvar NNEDs into different histopathologic types were as follows: SCH was present in 55 cases (70.5%), LS in 17 cases (21.8%), and other dermatosis in 6 cases (7.7%). The total number of coexisting VIN was six with a frequency of 7.7% (Table I). The epithelial changes suggestive of human papillomavirus (HPV) infection were found in 5 of 6 cases with VIN (83.4%).

Of 6 patients with VIN, only one (17%) had multifocal epithelial alterations of the female lower genital tract. One patient who had VIN3 with histopathologic HPV changes also had cervical intraepithelial neoplasia 1.

The mean age of patients with vulvar NNED was 52 years (range 26-72 years), while the mean age of patients with VIN coexisting with vulvar NNED was 55 years (range 37-74 years). The age of women suffering from VIN was not statistically different from the age of the other group.

There was only one patient with VIN1 coexisting with SCH of the vulva. However, the condition regressed completely after a course of medical treatment. Of the remaining 5 patients, 3 had skinning vulvectomy and 2 had laser evaporation of the vulvoperineal area. The mean follow-up duration for the patients with VIN was 15.5 months (range 2-40 months). None of the patients had recurrence of VIN during the follow-up period.

DISCUSSION

The women with VIN have a recognized risk of invasive squamous cell carcinoma; this risk has been reported to be 4-18% (5,6). VIN3, particularly presenting in young women, is a potentially aggressive lesion with a substantial risk of recurrence and progression to invasion (6). In the study by Jones and Rowan (6), a large percentage of women with untreated VIN3 developed invasive carcinoma (seven of eight women; 87.5%) compared with women who were treated for VIN3 (four of 113 women; 3.8%). The interval between the diagnosis of VIN3 and invasive cancer was only 6.5 years both in the treated group and in the untreated group. No recurrence in six patients with VIN, in this series, has been detected. However, the follow-up period, which ranged from 2 to 40 months was too short for the development of invasive lesions. In addition, up to half of the women with VIN have been reported to have associated lower genital tract neoplasia at another site (6). This association has been detected to be only 17% in this series.

HPV infection is associated with vulvar warts as well as with VIN and squamous cell carcinoma (7,8). Although HPV is more common in VIN in younger women, it is detected across a broad age range, suggesting that the virus plays a role in neoplasia of the vulva throughout life. Up to 90% of VIN lesions were detected to be positive for HPV types 16, 18, and
Vulvar intraepithelial neoplasia 33 by polymerase chain reaction amplification for HPV DNA (8-10). Although only histopathologic criteria were used for the detection of HPV infection in this study, 83.4% of women with VIN were demonstrated to have HPV related epithelial alterations.

Although NNEDs of the vulva are not premalignant conditions, these may predispose to neoplasias via effects of a chronic irritative process, scarring and atrophy (3,4). Patients who harbor these lesions appear to be at a somewhat greater risk for the development of dysplasia and subsequent carcinoma. The data in the literature on the frequency of VIN in vulvar NNEDs not associated with vulvar cancer vary, ranging from 1.9% to 9.4% (Table II). The rate of VINs coexisting with vulvar NNEDs was 7.7% in this series and within the range cited in the literature.

The age of women with VIN, in this series, was similar to the age of women with NNEDs of the vulva. Similar reports in the literature necessitate a colposcopic examination for all patients with vulvar NNEDs in all age groups (16).

Mild vulvar dysplasias associated with vulvar NNEDs have been reported to regress frequently with the medical treatment of the underlying NNED (15). A similar regression was observed for a patient with SCH and VIN1 in this series. The treatment of the remaining five patients included skinning vulvectomy or laser therapy as proposed by many authors (6,8,9,15).

In conclusion, patients with NNEDs must be followed carefully with regular and thorough examinations. Biopsies of any new lesions or previously recognized ones with more recent changes are mandatory to rule out the development of malignancies.

REFERENCES


