

## Neglected Vulvar 'Dermatitis' in a Young Woman: A Case of Vulvar Squamous Cell Carcinoma

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### Abstract

**Observation:** Squamous cell carcinoma (SCC) of the vulva is one of the most common tumors of the female reproductive system even if it is a rare malignancy. Vulvar SCC can have variable clinical presentations that may lead to misdiagnosis and diagnostic delay. We report a case of vulvar itchy 'dermatitis' from which an invasive squamous cell carcinoma developed following the long period of self-treatment.

### Introduction

Vulvar squamous cell carcinoma (VSCC) is relatively rare gynecologic malignancy [1]. It is commonly triggered by two different pathogenetic pathways: Human papillomavirus (HPV)- dependent or independent route. The non-HPV type mainly occurs in older women with lichen sclerosus<sup>1</sup>. Here, we report a case of HPV negative young woman with vulvar itchy 'dermatitis' from which an invasive squamous cell carcinoma developed following the long period of self-treatment.

### Case Report

44-year-old premenopausal woman was persuaded to get genitalia examination and presented with a 5-year history of pruritic lesion on vulvar skin. She had applied several topical remedies continuously in the course of this itchy period. On

clinical examination prepuce of clitoris, glans of clitoris was no longer distinguishable. There were reddish erosions within a whitish hyperkeratotic and infiltrated plaque on the superior pole of vulva (Figure 1). Areas of lichenification or excoriation were not detectable on the surrounding skin of the lesion.

The patient had no history of previous skin disease, and in particular no history of anogenital human papillomavirus (HPV) associated disease. Her past medical history was unremarkable. There was no family history of skin diseases. She had admitted to gynaecology department for a few times. Clinical examination had showed atrophy and sclerosis on labium minus. Pelvic ultrasonography had been normal. Vulvar biopsy and cervical smear had been taken. Vulvar biopsy had showed significant acanthosis with orthokeratosis, parakeratosis (Figure 2A). There were also subepidermal band like infiltration and focal minimal atypia in basal keratinocytes (Figure 2B). Ki-67 immunohistochemical stain was positive only in basal

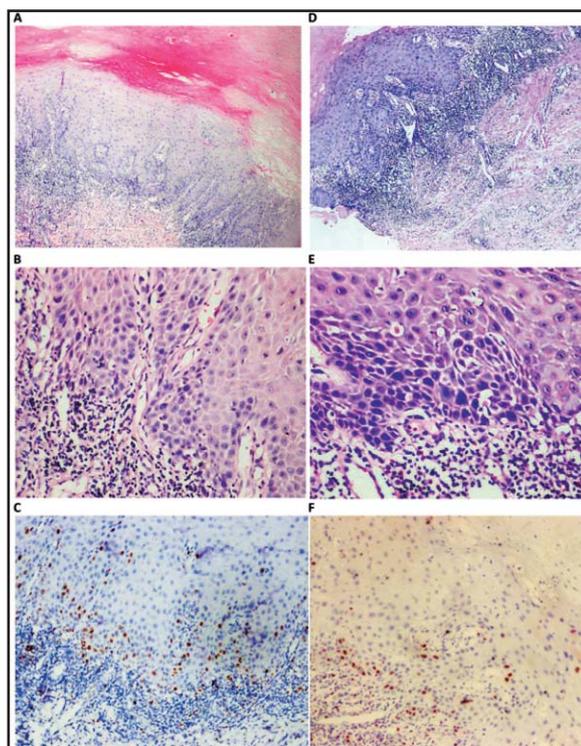


**Figure 1.** Clinical image of the vulvar lesion. Hyperkeratotic whitish plaque with erosions

and suprabasal cells (**Figure 2C**). Immunophenotyping for HPV were negative and also cervical cytology results were normal. A diagnosis of vulvar psoriasiform dermatitis was made and patient was treated with topical corticosteroid and emollients. Afterwards, as the patient had complained of intense pruritus, she had refused repetitive genital examination and requested practitioners to get 'just' relief from vulvar itch and occasionally managed her 'self-treatment' with topical remedies.

Initially, because of persistent lesion and symptoms, a new vulvar biopsy was performed. Histological examination of the new vulvar biopsy showed similar but more significant morphology (**Figure 2D**). There was significant lichenoid infiltration with atypia in basal and suprabasal cell layer. Ki-67 proliferation marker distribution was in basal and suprabasal cell layers. Pathologist emphasized the probability of neoplastic atypia and vulvar intraepithelial lesion (VIN) (**Figure 2E**). Swab culture was not provide any evidence of pathogenic bacterial or fungal infections.

Laboratory investigations found that the patient's complete blood count, routine blood tests and uri-



**Figure 2.** A. First biopsy shows lichenoid infiltration and psoriasiform hyperplasia. D. Histopathological findings are more significant in the second biopsy. B, E. High power images show atypia in both biopsy, but more conspicuous in the second (E). C, F. Ki-67 positive proliferative cells are scattered in basal cell layers in both biopsies. (A, D x 40; B; C; E; F x 100 original magnification, hematoxylin and eosin stain)

analysis were within the normal range. Syphilis and HIV (human immunodeficiency virus) serology were negative. Screening for metastasis by chest radiography, abdominal sonography, and whole body computer tomography showed no abnormalities. The patient was referred to the Department of Gynecology at which she was treated with wide radical local excision. Histopathological evaluation of resection material showed well differentiated keratinized squamous cell carcinoma with 0.1 cm invasion depth, disease free margins and chronic inflammation. She remains well for two months since the surgical procedure and remains under follow up.

## Discussion

Squamous cell carcinoma of the vulva is one of the most common tumors of the female reproductive system. Usual type of vulvar SCC is caused by high-risk HPV types. Rarely, in older patients chronic inflammation of the vulva (including lichen sclerosus, Hai-

ley-Hailey disease) may eventuate in SCC [2, 3]. Previous reports have shown that vulvar SCC can have variable clinical presentations that may lead to misdiagnosis and diagnostic delay [4, 5]. It can mimic benign conditions including contact dermatitis, psoriasis, and lichen sclerosus. Early lichen sclerosus may be devoid of distinct histopathological characteristics. Moreover secondary changes due to rubbing and scratching may complicate the diagnostic process. Of note, it is important to point out lichen sclerosus with dyskeratosis and parakeratosis, hyperplasia and/or basal cellular atypia should be closely monitored as these tend to progress to scc.

Health knowledge, attitudes and cultural beliefs regarding genitalia examination may cause more complicated diagnostic process in developing countries. Despite young age of our case neglected potential precursor inflammatory lesion may cause to scc development. It might be diagnosed and treated adequately if she had not avoided genitalia examination. Therefore, we believe that our patient presented an example of diagnostic delay because of avoidance of genitalia examination as a result of psychosocial influences.

Dermatologists might be the first to be consulted for vulvar cancer especially in the case of presenting with intense itch. They should also be aware of the precursor lesions and mimickers of this distressing condition which is increasing worldwide.

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