

Metastatic vulvar squamous cell carcinoma mimicking genital herpes



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INTRODUCTION

Metastatic disease to the skin can be difficult to diagnose clinically because it often mimics many infectious, inflammatory, and neoplastic skin conditions. Cutaneous metastases can present as dermal or subcutaneous nodules, exophytic tumors resembling melanoma or nonmelanoma skin cancer, erythematous patches and plaques resembling erysipelas or eczema, or indurated plaques resembling morphea or scleroderma.¹ Rarely, cutaneous metastases present as grouped papulo-vesicles resembling herpes group virus infections.¹

CASE REPORT

A 76-year-old woman with a history of stage IV vulvar squamous cell carcinoma (SCC) and recurrent genital herpes simplex virus (HSV) infections was seen by the inpatient dermatology consult service for a 1-week history of a burning sensation in the groin that was followed by the appearance of a vesicular rash. Invasive, poorly differentiated SCC of the anterior aspect of the vagina with metastases to the right pubic ramus and inguinal and iliac lymph nodes was diagnosed 4 months before presentation. The patient was treated with a combination of cisplatin and radiation, with her treatment course complicated by radiation dermatitis, a vesicovaginal fistula, bladder outlet obstruction, and sacral decubitus ulcers, for which the patient required debridement and placement of a suprapubic catheter.

Physical examination found a cachectic white woman with grouped tense vesicles on an erythematous base involving the suprapubic skin (Fig 1).

Abbreviations used:

HSV: herpes simplex virus
SCC: squamous cell carcinoma

Bilateral inguinal lymphadenopathy was noted. Direct fluorescent antibody testing and viral cultures were negative for HSV and varicella zoster viruses. Tissue culture was negative for bacteria, fungi, and acid-fast bacilli. Histopathologic examination of a vesicle edge found focal epidermal necrosis, intra-epidermal spongiform vesiculation, and mononuclear cells with hyperchromatic nuclei, prominent nucleoli, and atypical mitotic figures filling superficial and deep dermis and extending into the subcutaneous fat (Fig 2, A and B). The atypical mononuclear cells abut but do not arise from the epidermis, and these cells stained strongly with antibodies against AE1/AE3 and CAM5.2, confirming their epithelial origin (Fig 2, C). The current biopsy of the suprapubic skin was compared with the patient's prior vulvar SCC biopsy and results were found to be compatible with metastatic poorly differentiated vulvar SCC. The patient was discharged to hospice 5 days after biopsy and subsequently died 1 day later.

DISCUSSION

Vulvar cancer is uncommon, accounting for only 5% of female genitourinary malignancies.² Vulvar SCC accounts for more than 90% of all vulvar malignancies and presents in 2 different histologic

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Fig 1. Clinical appearance of the acute eruption involving the suprapubic skin, consisting of tense vesicles on an erythematous base.

fashions with distinct etiologies.² The keratinizing histologic type is observed in postmenopausal women who often have a history of autoimmune disease or chronic inflammatory disease, such as lichen sclerosus et atrophicus or erosive lichen planus.² The basaloid or warty histologic type, which carries a more favorable prognosis, classically occurs in young women who are infected with oncogenic strains of the human papillomavirus.²

Vulvar SCC can metastasize through direct extension to neighboring structures, lymphatic spread to regional lymph nodes, or hematogenous dissemination to distant sites.³ Cutaneous metastases from vulvar malignancies are exceedingly rare, with fewer than 10 cases reported in the literature to date.³ Cutaneous metastases from vulvar SCC, in particular, have presented as multiple, disseminated violaceous nodules, erythematous tumors, and lymphangioma circumscriptum.^{4,5} This case represents a unique morphologic presentation of cutaneous metastases from vulvar SCC masquerading as a recurrent vesicular HSV infection.

Both primary and metastatic cutaneous malignancies are reported to mimic HSV infections, including melanoma.^{1,6} In 2 cases, intermittently tender vulvar nodules and nonhealing genital ulcers unresponsive to systemic antiviral agents were only definitively diagnosed as basal cell carcinoma and invasive vulvar SCC, respectively, after histologic examination.^{7,8} Cutaneous metastases from anal SCC were also reported to present as vulvar ulcerations, and metastatic breast, colon, and transitional cell carcinoma of the bladder can all rarely present as papulo-vesicles in a grouped or zosteriform configuration.^{1,9,10} In our case, the acute onset of vesicles on an erythematous base after trauma, radiation, immunosuppression, and a prodrome of burning pain in a patient with stage IV vulvar SCC was initially highly suggestive of an HSV flare. This atypical

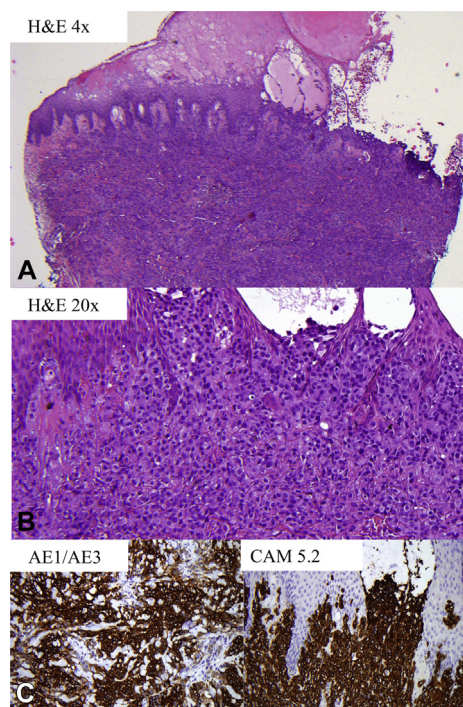


Fig 2. Histopathologic examination of a punch biopsy from the edge of a vesicle. **A** and **B**, Focal epidermal necrosis, intraepidermal spongiform vesiculation, and mononuclear cells with hyperchromatic nuclei, prominent nucleoli, and atypical mitotic figures filling the dermis and extending to the subcutaneous fat. **C**, The atypical mononuclear cells abut but do not arise from the epidermis, and these cells stained strongly with antibodies against AE1/AE3 and CAM5.2 (**A** and **B**, Hematoxylin-eosin stain and **C**, immunohistochemistry; original magnifications: **A**, $\times 4$; **B**, $\times 20$.)

presentation of cutaneous metastases highlights the importance of maintaining a high index of suspicion for occult metastatic disease and low threshold for biopsy when new vesicular skin lesions develop in individuals with a history of genitourinary malignancy.

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