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Case Presentation

Cutaneous Metastasis of Cervical Adenocarcinoma to the Vulva

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Abstract

Cervical cancer is one of the most common cancers and cause of cancer-related deaths in women worldwide. Cutaneous metastasis of cervical cancer, however, is exceedingly rare. It is generally seen late in the disease course and portends a poor prognosis. Herein we report a woman with a history of recurrent cervical cancer complicated by an unusual occurrence of metastasis to the vulva.

Key Words: Cervical Cancer, Cervical Adenocarcinoma, Metastasis, Cutaneous Metastasis, Vulva

Introduction

Cervical cancer is the second most common cancer and fourth most frequent cause of cancer-related deaths in women worldwide [1]. Although the rate of invasive cervical cancer is much lower in the United States because of routine cytological screening [2], over 12,000 new cases were estimated in 2011 [3]. Patients with cervical carcinoma are at risk for local invasion and metastasis, most often to the lungs, bone, and liver [4]. Cutaneous metastasis, however, is exceedingly rare, with an incidence of 0.7% to 1.3% [5,6]. Dermatologic manifestations are usually seen late in the course of disease and generally have a poor prognosis. We report a case of recurrent cervical adenocarcinoma complicated by cutaneous metastasis to the vulva.

Case Report

A 37-year-old woman was diagnosed with adenocarcinoma of the cervix, FIGO stage IB2, in January 2008. She subsequently received an exploratory laparotomy, radical abdominal hysterectomy, pelvic and para-aortic lymph node dissection, and transposition of the ovaries bilaterally. Histopathology revealed moderately differentiated invasive adenocarcinoma of the endocervix. The tumor was immunoreactive for p16 and invaded 1.5cm into the cervical wall. Margins were positive at the vaginal cuff and regional metastasis evident in 1 of 8 left pelvic lymph nodes. She was treated with concurrent chemoradiation therapy consisting of cisplatin and intensity modulated radiation therapy (IMRT) to the vaginal apex and pelvic lymph nodes.

In April 2009, a vaginal cuff biopsy revealed recurrent cervical cancer. The patient underwent an attempted pelvic exenteration, but the procedure was aborted because of unresectable left pelvic side wall invasion. Multiple cycles of palliative chemotherapy were initiated. PET/CT scans in February and June 2010 showed no metabolically active lesions. However a pap smear in October 2010 demonstrated evidence of adenocarcinoma. A PET scan confirmed recurrence with para-aortic lymph node involvement as well.

In June 2012, the patient was admitted for pain management and evaluation of multiple vulvar lesions of one month duration. The dermatology department was consulted for suspected herpes simplex infection. On physical examination, there were multiple pink indurated papules and erosions involving patient's vulva bilaterally, extending to the inguinal folds and perineum (Figure 1).



Figure 1. Multiple papules on patient's vulva, perineum, and inguinal folds

A skin biopsy demonstrated moderately to poorly differentiated adenocarcinoma with lymphovascular invasion (Figure 2).

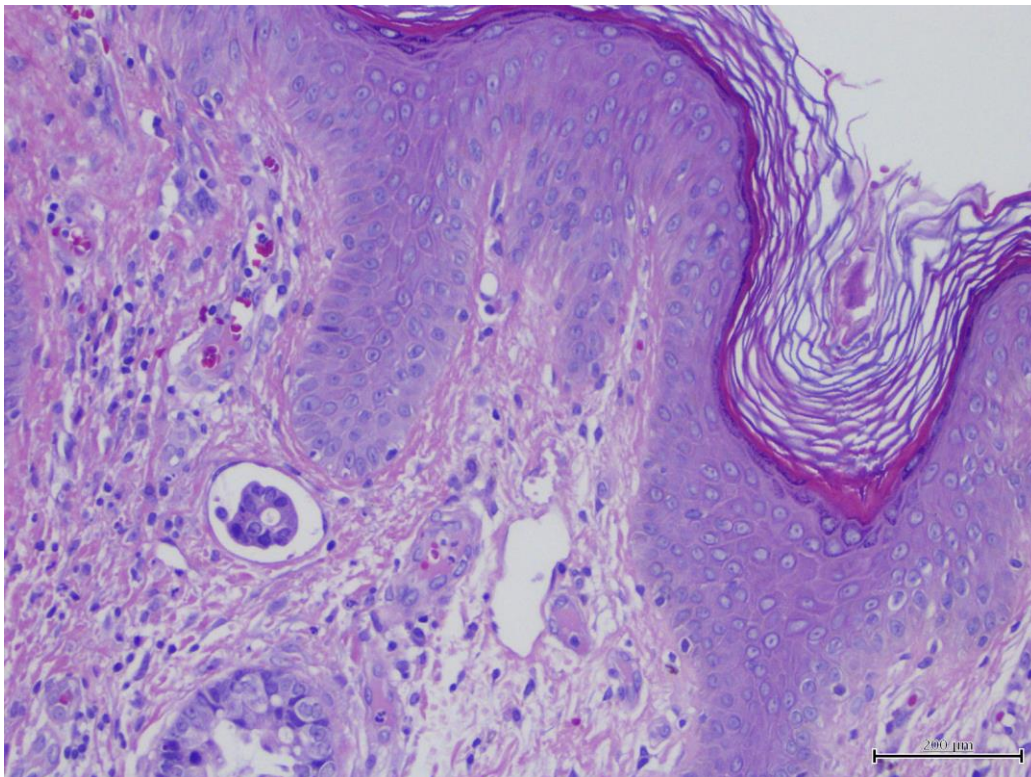


Figure 2. Histopathology of biopsy specimen revealing moderately to poorly differentiated adenocarcinoma within the dermis. Lymphovascular invasion is seen in the superficial dermis. H&E section, 20x magnification.

The immunophenotype was consistent with her primary cervical cancer (Figure 3).

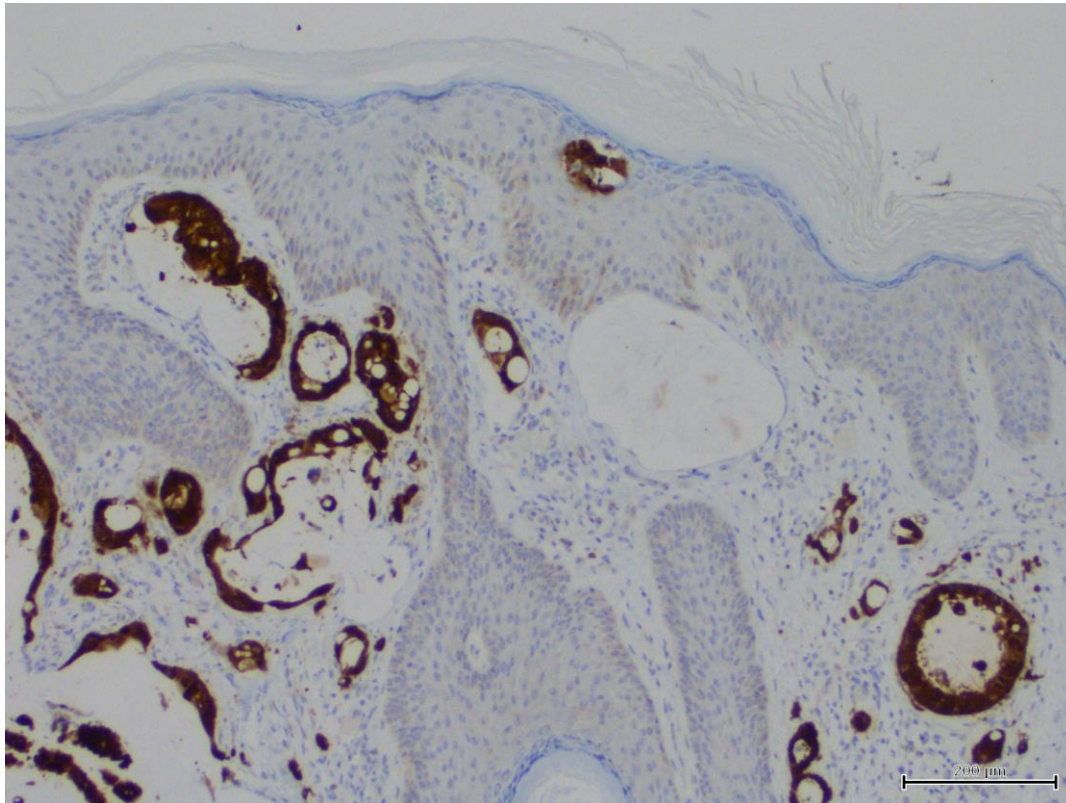


Figure 3. Immunohistochemistry for p16 is strongly positive within the metastatic adenocarcinoma, favoring the cervix as the primary location. Metastatic foci are present within the epidermis and dermis of the vulva. p16 immunostain, 10x magnification.

The patient has since required multiple admissions for refractory pelvic pain. An intrathecal pump was implanted, achieving moderate relief. She elected to discontinue chemotherapy and is now under hospice care.

Discussion

Cutaneous metastasis from solid tumors is a relatively uncommon phenomenon. A recent meta-analysis evaluating 20,380 cases of visceral malignancy found an overall incidence of cutaneous metastasis of 5.3% [7]. In women, metastasis to the skin typically arises from breast cancer, melanoma, and ovarian cancer [8]. Cutaneous metastasis arising from cervical cancer, however, is extremely rare. The main sites involved are the abdomen, vulva, and chest [5]. This is consistent with the finding that most cutaneous metastases occur near the primary tumor. Nevertheless, cases involving the scalp, face, extremities, surgical scar, and drain sites have also been reported [5,9-14]. Skin involvement results from direct extension or metastasis. Metastatic spread occurs after malignant, de-differentiated cells extend through the basement membrane, disseminate into the lymphatic and hematogenous circulations, and proliferate at secondary foci.

Multiple morphological appearances of cutaneous cervical cancer metastasis have been described, including nodules, plaques, and maculopapular lesions [15]. A review of 15 such cases noted the presence of nodule(s) in 87% of patients and multiple lesions in 67% of patients [5]. Metastatic lesions are often described as discrete, firm, round, non-tender, and skin colored to red.

Whereas metastasis to the skin may be the presenting feature of an internal malignancy, this has not been reported in cervical cancer. In fact, skin involvement typically indicates widespread disease and is associated with a poor prognosis. The average length of survival after diagnosis of cutaneous metastasis of cervical cancer is 8.5 months [5]. Our patient developed metastasis to the vulva at stage IVB cervical adenocarcinoma, 4 years after her original diagnosis.

The diagnosis of cutaneous metastasis of cervical cancer is generally based on the histological appearance of biopsy specimens. Owing to an aberrant expression of p16 in cervical cancer, immunohistochemistry has been shown to be a particularly useful identifier as well [16]. Because most lesions are discovered late in the disease course, palliative measures are the mainstay of treatment, but local excision has been described [12,17]. In conclusion, when patients with a history of cervical cancer present with vulvar lesions, cutaneous metastasis should be considered in the differential diagnosis.

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