

Cutaneous metastases from adenocarcinoma of the ovary



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INTRODUCTION

Cutaneous metastasis is an uncommon manifestation of internal malignancy. The rate of cutaneous metastasis in ovarian cancer is 3.5%, and median time of survival after appearance of cutaneous metastasis is 4 months.¹ The lesions involved are often described as flesh colored, pink, or violaceous cutaneous or subcutaneous nodules, although reports of non-nodular metastases exist.² We report the case of a 24-year-old woman with refractory stage IIIB mucinous adenocarcinoma of the ovary presenting with cutaneous metastases to her breasts masquerading as localized scleroderma.

CASE REPORT

A 24-year-old Hispanic woman presented with a 3-month history of painful, pruritic, progressive rash localized to both breasts. Her medical history was significant for refractory metastatic stage IIIB mucinous adenocarcinoma of the ovary diagnosed 10 months before appearance of the rash. Initial management included right salpingo-oophorectomy, omentectomy, stripping of bladder peritoneum, pelvic and para-aortic lymph node dissection, and appendectomy. She declined adjuvant chemotherapy and completion surgery in a desire to preserve fertility. Five months after treatment she presented with abdominal pain, bilateral hydronephrosis, renal failure, ascites, and computed tomography findings consistent with recurrence of her ovarian adenocarcinoma, and 3 months later the rash began.

She was not on chemotherapy at presentation. The rash initially manifested near her port site on the right chest wall and was attributed to allergic contact dermatitis from ChloroPrep (Becton, Dickinson and

Company, Franklin Lakes, NJ). Over the next 2 months, the patient described enlargement and hardening of bilateral breasts, originating on the right and spreading to the left. Her medical history was otherwise normal.

On physical examination, bilateral breasts were tender to palpation and exhibited diffuse dermal induration and taut skin with erythematous and hyperpigmented patches (Fig 1). There was no nipple discharge, peau d' orange, nodular infiltrates, or axillary, cervical, or supraclavicular lymphadenopathy. Findings for the remainder of the full-body skin examination were normal with the exception of a large suprapubic abdominal mass noted on deep palpation.

Histopathologic examination of skin from the left breast found tumor cells and mucin resembling primary tumor. Immunostaining for estrogen and progesterone receptors, mammaglobulin, and gross cystic disease fluid were negative. The patient was discharged home to hospice care and died 4 months after appearance of the rash.

DISCUSSION

Cutaneous metastasis is an uncommon manifestation of internal malignancy. Spread of a primary tumor to the skin typically occurs late in the course of disease but may be the presenting sign of underlying cancer. The overall incidence of cutaneous metastasis from visceral neoplasia is 5.3%. Breast cancer has the highest incidence of cutaneous metastasis (24%), whereas lung, colorectal, renal, ovarian, and bladder cancers all have rates between 3.4% and 4.0%. The most common site for cutaneous metastases from visceral malignancies to occur is the chest, comprising 28.4% of the total, followed by the abdomen (20.2%), extremities (12%), neck (11%), back (11%), scalp (7%), pelvis

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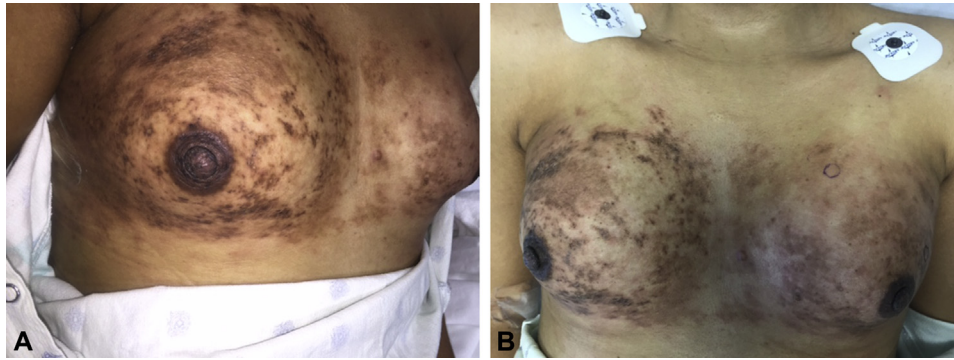


Fig 1. Cutaneous metastases from adenocarcinoma of the ovary presenting as diffuse dermal induration and taut skin with erythematous and hyperpigmented patches.

(6%) and face (5%). These lesions are often described as flesh-colored, pink, or violaceous cutaneous or subcutaneous nodules, although reports of non-nodular metastases exist.²

The most common sites of distant metastasis for ovarian cancer are the pleura, liver, bone, lung, and lymph nodes, whereas cutaneous metastases are rare.^{3,4} In a study performed on 220 patients with epithelial ovarian carcinoma, a rate of 3.5% for cutaneous metastases was detected. The average time of appearance of skin metastases after the diagnosis of ovarian cancer was 23.4 ± 12 months, and the diameter of the skin lesions (usually nodular) ranged between 0.5 and 3.0cm. Median survival after diagnosis of skin metastasis from ovarian cancer was 4 months.¹

The most common type of cutaneous metastatic ovarian carcinoma is epithelial ovarian adenocarcinoma. This carcinoma can have serous, endometrioid, mucinous, or clear epithelial cells, which often manifests with nuclear atypia, mitoses, and cystic and solid cellular arrays. Cutaneous metastatic ovarian carcinoma most commonly presents as solitary, grouped papules and or nodules on the trunk.⁵ Reports indicate that only 12% of cases of cutaneous metastasis from ovarian carcinoma occur on the limbs, with most metastatic skin lesions occurring in skin adjacent to the primary ovarian cancer including the abdominal wall.^{3,6} Cutaneous metastases were found at or around abdominal wall incisions, from laparotomy, laparoscopy, port and catheter, or drainage scars.¹

Other forms of cutaneous metastatic ovarian carcinoma include herpetiform-pattern metastatic nodules, erythema annulare, cutaneous metastases with calcospherites, scalp nodules, subungual metastases, skin nodules, subcutaneous metastases, and lymphangiosis carcinomatosa of the skin. Paraneoplastic associations of ovarian carcinoma include acanthosis nigricans, Raynaud's phenomenon, scleroderma, dermatomyositis, and palmar fasciitis with polyarthritis. Both cutaneous paraneoplastic effects and metastatic presentations portend a poor prognosis in ovarian carcinoma.⁵ Our case is one example of the many unusual presentations of cutaneous metastatic ovarian cancer.

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