10-15-2012

Ulcerated Plaques in the Pelvic Region of an Adult Female

Benjamin Barrick

Brian Matthys

Garth R. Fraga

Ulcerated plaques in the pelvic region of an adult female

Benjamin Barrick BS, Brian Matthys DO, Garth Fraga MD FCAP

Dermatology Online Journal 18 (10): 7

Kansas City University of Medicine and Biosciences, Kansas City, Missouri

Abstract

Cutaneous metastatic mammary carcinoma may occur in patients with a history of breast carcinoma. Cutaneous metastases typically present as firm papulonodules on the chest. We describe a rare case of cutaneous metastatic mammary carcinoma arising in a 45-year-old woman presenting as painful, indurated plaques with ulceration in the pelvic region.

Introduction

Cutaneous metastatic mammary carcinoma (CMMC) is a complication that may arise in patients with a history of breast cancer. Typically, the lesions of CMMC present with acute-onset and form persistent, firm papulonodules across the anterior chest. We report a rare form of CMMC, carcinoma en cuirasse, presenting as isolated lesions in the pelvic region of a 45-year-old female. To our knowledge, isolated pelvic CMMC has not been reported in the literature until now.

Case report

A 45-year-old woman presented with a four-month history of painful, enlarging, macerated plaques located on the mons pubis, labia majora, and throughout the intertriginous regions of the pelvis. Her medical history was notable for ductal carcinoma of the breast diagnosed two years prior. Within the past year, the patient was hospitalized for cellulitis of the leg, which resolved after a short course of intravenous antibiotics. Current medications included lapatinib and zolendronic acid. Examination revealed indurated plaques with ulceration and bright red granulation tissue isolated to the pelvic region (Figure 1). The lesions were foul-smelling with oozing mucopurulent secretions. A biopsy was obtained (Figures 2 and 3).

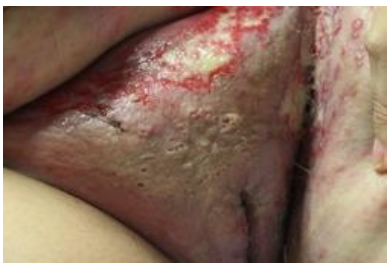

Figure 1

Figure 1. Indurated plaques with ulceration and bright red granulation tissue on the mons pubis, labia majoris, and intertriginous regions of the thigh

Biopsy demonstrated ductal adenocarcinoma with epidermotropism and lymphatic invasion (Figure 2). The tumor cells were positive for cytokeratin 7 (Figure 3) and estrogen receptor and negative for cytokeratin 20. Cutaneous metastatic mammary carcinoma was diagnosed.

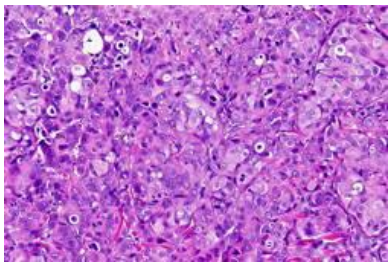

Figure 2

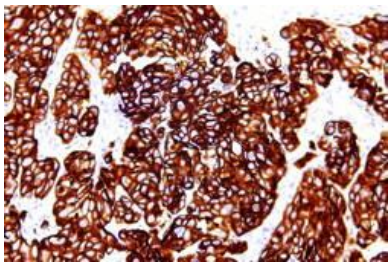

Figure 3

Figure 2. Tumor cells demonstrating epidermotropism and lymphovascular invasion (H&E x100)

Figure 3. Tumor cells with positive cytokeratin 7 immunohistochemical staining (cytokeratin-7 x100)

The patient continued treatment with lapatinib and additional therapy with capecitabine was initiated. She was discharged from the hospital in a stable condition to a rehabilitation unit.

Discussion

Cutaneous metastases are not uncommon in patients with breast cancer. Krathen et al. reported cutaneous metastases in 457 of 1,930 patients with breast cancer (23%) [1]. Cutaneous metastasis usually presents within 60 months following a diagnosis of breast cancer [2]. Eighty percent of cutaneous metastatic mammary carcinoma (CMMC) originates from mammary ductal carcinoma [3]. Patients usually present with acute-onset, persistent, firm papulonodules across the anterior chest [3]. The scalp, face, upper extremities, back, and abdomen may be involved [4]. To the best of our knowledge, the pelvic cutaneous metastases seen in our patient have not been previously reported.

A wide variety of clinical presentations have been described including nodular metastatic carcinoma, inflammatory metastatic carcinoma, metastatic carcinoma en cuirasse, telangiectatic metastatic carcinoma, alopecia neoplastica, Paget disease, breast carcinoma of the infra-mammary crease, and metastatic carcinoma of the eyelid with histiocytoid histology [5]. The clinical presentation of CMMC seen in our patient best corresponds with the carcinoma en cuirasse pattern. Carcinoma en cuirasse is characterized by a diffuse morphea-like induration of the skin, which begins as scattered, firm, lenticular papulonodules overlying an erythematous cutaneous surface [5].

Vascular and lymphatic invasion are common histological features in cutaneous metastasis [6]. Immunohistochemistry is a useful adjunctive diagnostic tool. Metastatic mammary carcinoma often demonstrates positive staining for gross cystic disease fluid protein-15, estrogen receptor, progestin receptor, and cytokeratin 7, but generally lacks reactivity for cytokeratin 20 [6]. The differential diagnosis includes primary adnexal adenocarcinomas. Primary adnexal carcinomas exhibit positive p63 and podoplanin (D2-40) staining whereas staining is absent in cutaneous metastases [7].

Cutaneous metastasis is a grave prognostic indicator. Median survival for patients with CMMC is 13.8 months [8]. There are no large studies on treatment of CMMC and general systemic treatment modalities for metastatic breast carcinoma are used.

Our case highlights the importance of maintaining a high level of clinical suspicion for CMMC in women with a history of mammary carcinoma. Although rare, distant metastases may present with varied morphology and symptoms. Dermatologists should be aware of the variable presentations of CMMC.

References

1. Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: a meta-analysis of data. *South Med J*. 2003;96(2):164-167. [PubMed]

2. Marcoval J, Moreno A, Peyri J. Cutaneous infiltration by cancer. *J Am Acad Dermatol*. 2007;57(4):577-580. [PubMed]

3. Lookingbill DP, Spangler N, Helm KF. Cutaneous metastasis in patients with metastatic carcinoma: a retrospective study of 4020 patients. *J Am Acad Dermatol*. 1993;29(2 Pt 1):228-36. [PubMed]

4. Brownstein MH, Helwig EB. Patterns of cutaneous metastasis. *Arch Dermatol*. 1972;105(6):862-8. [PubMed]

5. Schwartz RA. Cutaneous metastatic disease. *J Am Acad Dermatol*. 1995;33(2 Pt 1):161-82. [PubMed]

6. Hussein MR. Skin metastasis: a pathologist’s perspective. *J Cutan Pathol*. 2010;37(9):e1-20. [PubMed]

7. Plaza JA, Ortega JF, Stockman DL, et al. Value of p63 and podoplanin (D2-40) immunoreactivity in the distinction between primary cutaneous tumors and adenocarcinomas metastatic to the skin: a clinicopathologic and immunohistochemical study of 79 cases. *J Cutan Pathol*. 2010;37(4):403-10. [PubMed]

8. Schoenlaub P, Sarraux A, Grosshans E, et al. Survival after cutaneous metastasis: a study of 200 cases. *Ann Dermatol Venereol*. 2001;128(12):1310-1315. [PubMed]