

Carcinoma Erysipeloides from Prostate Cancer Presenting as Cellulitis

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We report a 72-year-old man with carcinoma erysipeloïdes presenting as cellulitis of the thigh. Immunohistochemical study of the skin biopsy showed positive staining to prostate-specific antigen, confirming that the tumor originated in the prostate.

Prostate cancer is the most common nondermatologic malignancy in men. In the rare case when prostate cancer metastasizes to skin, it presents as solitary or multiple nodules. We report an unusual case of carcinoma erysipeloïdes from metastatic prostate cancer presenting as cellulitis.

Case Report

A 72-year-old man presented with a 2-week history of "cellulitis" of the left thigh, unresponsive to antibiotics. He denied fever or chills, but noted increased warmth over the affected area. Seven years previously, he underwent radical prostatectomy and bilateral pelvic lymph node dissection for prostate carcinoma. Two years previously, he developed persistent left lower extremity swelling and elevated serum prostate-specific antigen (PSA) of 25 ng/ml (normal, < 4 ng/ml). Evaluation for metastatic disease, including computed tomography (CT) of the abdomen and pelvis as well as bone scans, was negative. Leuprolide was initiated and the serum PSA level normalized.

At presentation, the physical examination revealed erythematous indurated plaques on the upper medial left thigh (Figure 1). Serum PSA was normal. Bone scan was negative; CT scan revealed bilateral inguinal lymphadenopathy suggestive of metastases. Skin biopsy revealed adenocarcinoma within dilated lymphatic vessels (Figure 2) and between collagen bundles in the dermis that showed positive reactivity to PSA immunostaining (Figure 3).

The cutaneous lesions and lymphadenopathy responded to radiation treatment. However, 18 months later, he developed extensive indurated erythematous



FIGURE 1. Erythematous, warm, indurated plaques involving the left thigh.

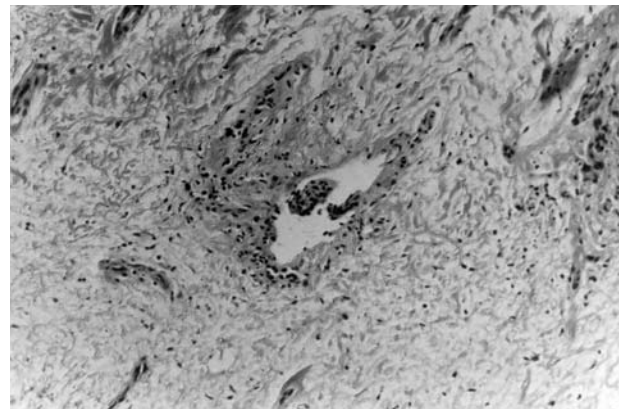


FIGURE 2. Tumor cells within lymphatic vessels (H&E; original magnification, X160).

plaques involving his suprapubic region, inguinal folds, and upper thighs (Figure 4). Skin biopsies again confirmed the presence of PSA-positive tumor cells. Serum PSA level was elevated at 26 ng/ml, and CT scan with subsequent biopsy documented metastasis to the paraspinous muscle. These lesions were treated with radiotherapy.

Comments

Prostate cancer rarely metastasizes to the skin. Lookingbill *et al*¹ noted that in 4,020 patients with

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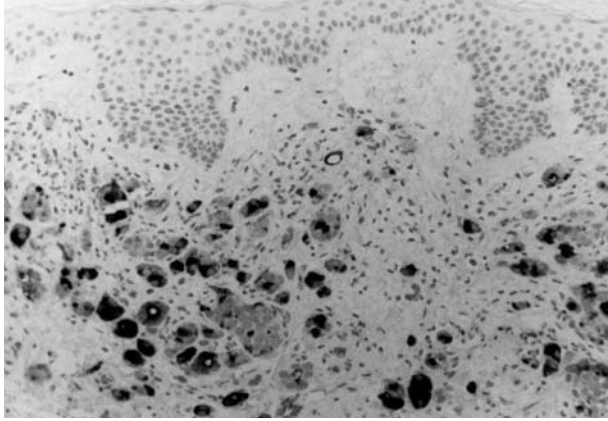


FIGURE 3. Tumor cells with positive prostate-specific antigen immunostaining (original magnification, X100).



FIGURE 4. Extensive recurrent carcinoma erysipeloïdes after radiation therapy.

metastatic disease, 10 percent had cutaneous metastases; 207 patients had metastatic prostate cancer, but none had skin metastases. In other reviews, cutaneous metastases from prostate carcinoma account for <1 percent of all cutaneous metastases.^{2,3} When reported, it usually manifests as multiple nodules in the suprapubic region and thighs.⁴

Our patient presented with carcinoma erysipeloïdes involving his left thigh. Erysipeloid or inflammatory metastases, sometimes mistaken for cellulitis, are most frequently seen in metastatic breast carcinoma and appear to be caused by tumor infiltration of dermal lymphatics.^{1,5,6} This entity is to be differentiated from cancer en cuirasse, or scirrhous carcinoma, in which the skin is indurated and biopsy reveals fibrosis and only a few tumor cells.⁵ Rarely, carcinoma erysipeloïdes is associated with other malignancies, including malignant melanoma and cancers of the uterus, lung, ovary, stomach, tonsils, pancreas, rectum, and parotid glands.⁶⁻¹¹ After careful literature review, we have found only one other report of carcinoma erysipeloïdes purportedly associated with prostate cancer. This patient had a pararenal mass and a random prostate biopsy specimen that revealed adenocarcinoma, which stained negative for PSA. No PSA stain of the skin was reported.¹² While on leuprolide, our patient had normal PSA levels; however, the tumor cells in the skin stained strongly positive for PSA.

The origin of cutaneous metastases often cannot be determined with certainty from routine histologic studies. Therefore, the use of immunohistochemical studies such as PSA and prostatic acid phosphatase are important because of their high specificity and sensitivity with negative staining, found only in rare undifferentiated prostatic tumors.⁴ Our case demonstrates that metastatic prostate carcinoma may present as inflammatory carcinoma of the skin, and these le-

sions can mimic cellulitis. Skin biopsies with appropriate immunohistochemical stains are important to confirm the diagnosis of metastatic prostate cancer.

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