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E- CASE REPORT

Distant Cutaneous Metastases of Prostate Cancer: A Report of 2 Cases☆

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KEYWORDS
Cutaneous metastasis;
Prostate cancer;
Prostein;
Prostate-specific membrane antigen

Abstract Cutaneous metastases of prostate cancer are extremely rare. We present 2 cases of distant cutaneous metastases at atypical locations of prostate adenocarcinoma, and highlight the value of 2 immunohistochemical stains—prostatic acid phosphatase and prostate-specific membrane antigen—that can aid diagnosis, particularly in cases with negative staining for prostate-specific antigen.

PALABRAS CLAVE
Metástasis cutáneas;
Cáncer próstata;
Prosteína;
Antígeno específico de membrana prostática

Metástasis cutáneas a distancia de cáncer de próstata: 2 casos

Resumen Las metástasis cutáneas de cáncer de próstata son extremadamente infrecuentes. Presentamos 2 casos de metástasis cutáneas a distancia de adenocarcinoma de próstata, con localización atípica y destacando 2 tinciones inmunohistoquímicas que pueden ayudar al diagnóstico (fosfatasa ácida prostática y el antígeno prostático específico de membrana prostática), fundamentalmente en aquellos casos en los que el antígeno prostático específico es negativo.

Introduction

Prostate cancer is one of the most common noncutaneous malignant tumors in men and a frequent cause of cancer-related death. Despite its high prevalence and incidence, skin metastases are extremely rare. Few cases of skin metastases from prostate cancer have been reported in the literature. Most skin metastases have been on the penis and scrotum; distant skin metastases are much less common and have an atypical clinical presentation that can delay diagnosis.[1]

We present 2 cases of patients with distant skin metastases of prostate cancer, drawing attention to the unusual site and clinical presentation.

Case 1

The patient was a 66-year-old man with stage IV, Gleason 8 (5 + 3) adenocarcinoma of the prostate diagnosed 11 years

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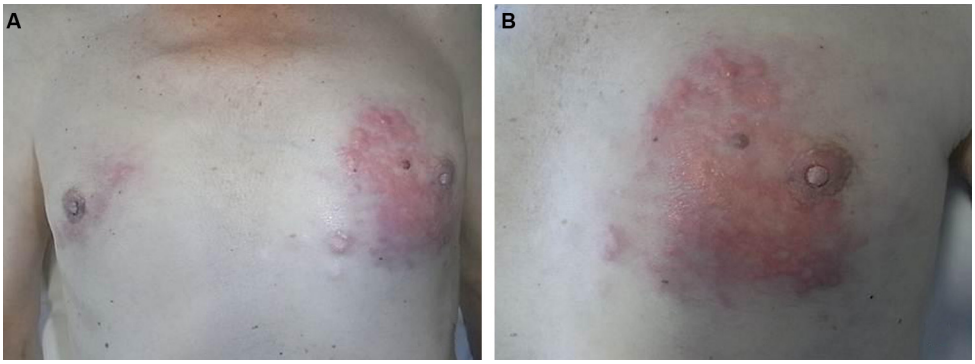

Figure 1 Case 1. A, Two indurated plaques on the breasts. B, A yellowish erythematous plaque on the left breast.

Table 1 Immunohistochemistry.

	Case 1	Case 2
Cytokeratin AE1/AE3	+	+
E-cadherin	+	Not performed
Cytokeratin7	—	Not performed
Cytokeratin20	—	Not performed
Epithelial membrane antigen	—	Not performed
Mammaglobin	—	Not performed
GCDFP-15	—	Not performed
S-100	—	Not performed
Melan-A	—	Not performed
HMB-45	—	Not performed
Estrogen/progesterone receptors	—	Not performed
CDX2	—	Not performed
Thyroid transcription factor-1	—	Not performed
Prostate specific antigen	—	+
Prostein 10E3	—	+
Prostate specific membrane antigen	+	+
Androgen receptors	+	+
Prostatic acid phosphatase	+	+

earlier and treated by radical prostatectomy, pelvic radiotherapy, hormone therapy, and chemotherapy. He presented 2 infiltrated, stony-hard plaques in a linear distribution on both breasts, the larger one being on the left breast. The plaques were formed of yellowish papular lesions that had first appeared approximately a year earlier and had increased progressively in size (Fig. 1, A and B). The patient described induration of both breasts in recent years; this had been interpreted as gynecomastia related to his hormone treatment. During follow-up in oncology, the patient had presented a progressive elevation of prostate specific antigen (PSA) levels in blood over the previous months (PSA 7.45 ng/ml in the latest blood tests before consultation; PSA, 3.38 ng/ml 2 months earlier).

Skin biopsies were taken from both plaques. Routine techniques showed poorly differentiated tumor cells with an epithelioid appearance and a diffuse growth pattern. Immunohistochemistry (Table 1) was positive for cytokeratin AE1/AE3, prostate specific membrane antigen (PSMA) 3E6, E-cadherin, androgen receptors, and prostatic acid phosphatase (this last parameter was positive in a smaller number of tumor cells) (Fig. 2, A-C). These findings strongly supported the diagnosis of skin metastases from the patient's adenocarcinoma of the prostate and ruled out a primary breast tumor.

After the diagnosis of skin metastases, and in view of the progression of the bone metastases, chemotherapy treatment was reinitiated. The clinical course was poor and the patient died a year later.

Case 2

This 86-year-old man was diagnosed with stage IV, Gleason 7 (3 + 4) adenocarcinoma of the prostate in 2010 and had been treated with total hormonal blockade and chemotherapy. Three years later the patient consulted for asymptomatic skin lesions that had arisen approximately a week earlier and had increased progressively in size and number. Physical examination revealed indurated, erythematous, papules grouped on the anteromedial surface of the right knee and isolated nonindurated lesions of similar appearance but smaller size that had arisen hours earlier on the anterior surface of the same leg (Fig. 3, A and B).

Biopsy of a lesion showed a poorly differentiated tumor of epithelial appearance, with a diffuse growth pattern. Immunohistochemistry was positive for cytokeratin AE1/AE3, PSA, androgen receptors, prostatic acid phosphatatase, prostein (Fig. 4, A-C), and PSMA (present in only a small number of tumor cells) (Table 1). Based on this immunohistochemistry profile, the tissue was reported as skin metastases from a poorly differentiated adenocarcinoma, compatible with a prostatic origin. The patient died a month later.

Discussion

Prostate cancer is usually associated with bone, lung, liver, and lymph node metastases; skin involvement is very rare (less than 1%). When prostate cancer metastasizes to the skin, the metastases typically appear locally as asymptomatic papules or nodules, mainly on the genitalia, suprapubic region, or root of the thighs. Distant skin metastases are rarer and can affect the chest and head, without the typical nodular morphology, with a clinical presentation that can mimic other skin diseases (zosteriform distribution,