

## **SUBCUTANEOUS METASTASIS OF PROSTATE CANCER**

Oscar Miranda Aranzubia, Jorge Garcia Rodriguez, Blanca Vivanco Allende<sup>1</sup>, Jesus Maria Fernandez Gomez, Raquel Sacristan Gonzalez, Miguel Alvarez Mugica and Francisco Javier Regadera Sejas.

Urology Department I and Pathology Department<sup>1</sup>.  
Central University Hospital of Asturias. Oviedo. Spain.

**Summary.-** *OBJECTIVES:* Prostate cancer tends to spread to regional lymph nodes and bone, and, to a lesser degree, to lung, liver, and brain. Metastases in other locations are exceptional.

To review the frequency and clinical characteristics of metastasis to subcutaneous cellular tissue in adenocarcinoma of the prostate.

*METHODS:* The case of a 71-year-old man diagnosed of adenocarcinoma of the prostate is reported. The patient underwent radical prostatectomy and artificial sphincter for stress urinary incontinence.

*RESULTS:* During follow-up the patient showed biochemical progression, local recurrence, and bone metastasis. The disease metastasized in the subcutaneous tissue around the reservoir of the artificial sphincter.

*CONCLUSIONS:* Prostate cancer is highly prevalent in our part of the world. The clinical finding of metastasis in organs other than bone or regional lymph nodes is accompanied by a short survival. Metastases in subcutaneous tissue may be underdiagnosed due to its indolent clinical course and possible absence of PSA elevation. In any case, subcutaneous metastases have an unfavorable prognosis.

**Keywords:** Prostate cancer. Subcutaneous metastasis. Artificial urinary sphincter.

**Resumen.-** *OBJETIVOS:* La tendencia a la diseminación del cáncer de próstata es sobre todo a los ganglios linfáticos regionales y hueso, y en una menor proporción a pulmón, hígado y cerebro. El hallazgo de metástasis en otras localizaciones es un hecho excepcional.

Revisar la frecuencia y características clínicas de las metástasis de adenocarcinoma de próstata en el tejido celular subcutáneo.

*MÉTODOS:* Presentamos el caso de un varón de 71 años que se diagnóstico de un adenocarcinoma de próstata. Se realiza prostatectomía radical y colocación de esfínter artificial por incontinencia urinaria de esfuerzo.

*RESULTADOS:* Durante el seguimiento evoluciona con progresión bioquímica, recidiva local y metástasis óseas, es diagnosticado de metástasis en tejido subcutáneo perirreservorio de esfínter artificial.

*CONCLUSIONES:* El cáncer de próstata es una enfermedad muy prevalente en nuestro medio, en la cuál el hallazgo clínico de metástasis en organos distintos al hueso o ganglios linfáticos regionales, se sigue de un corto periodo de supervivencia. El diagnóstico de metástasis en el tejido subcutáneo es un hecho que tal vez estar infradiagnosticado debido su curso clínico indolente y que podría además no elevar las cifras de PSA, en cualquier caso es un dato de mal pronóstico.

**Palabras clave:** Cáncer de próstata. Metástasis subcutánea. Esfínter urinario artificial.

## CORRESPONDENCE

Oscar Miranda Aranzubia  
Hospital Universitario Central de Asturias  
Celestino Villamil s/n  
33006 Oviedo. (Spain)

mirandaaranzubia@gmail.com

Accepted for publication: June 27<sup>th</sup>, 2008.

## INTRODUCTION

Cancer of the prostate is a major cause of morbidity and mortality in Spain. In the United States, it is the most frequently diagnosed cancer and the second most common cause of death in men (1). The National Institute of Statistics of Spain reports 5.412 deaths due to

prostate cancer in 2006 (2). The most frequent histologic type is adenocarcinoma, which is strongly hormone-dependent (3).

Prostate cancer spreads, by order of frequency, to regional lymph nodes, bone and finally organs; it has a predilection for lung, liver, and brain (4). Metastasis to other sites in the body is rare, although it has been suggested that soft-tissue metastases may be more common than found in practice as diagnosis usually is post mortem. Soft-tissue metastasis can occur anywhere in the body (5). In any case, metastasis of prostate adenocarcinoma to skin and subcutaneous cellular tissue can be considered exceptional, with a probability of less than 0.3% (5).

## CASE REPORT

We report the case of a 71-year-old man diagnosed of prostate adenocarcinoma stage pT3c, Gleason 7, with normal TC and radionuclide scan in 1995. He was treated with neoadjuvant hormone therapy and radical prostatectomy, followed later by installation of an artificial sphincter.

## MATERIALS AND METHODS

Two years after surgery, the patient exhibited biochemical disease progression with histologically confirmed recurrence in the urethro-vesical junction. Total androgen blockade was prescribed but was poorly tolerated due to hepatotoxicity. Since 2002, the patient has been given quarterly LHRH analog and antiandrogen.

In 2006, CT showed right ureterohydronephrosis, secondary renal atrophy, and blastic metastasis in the rig-

ht iliac ala. Histopathology revealed adenocarcinoma of the prostate (Gleason 4+5) with PSA 0.5 ng/ml.

In 2007, the patient was readmitted for removal of the artificial sphincter cuff by extrusion. Months later, the reservoir had to be removed due to local discomfort and signs of skin inflammation. The results of biopsy of the tissue around the reservoir were consistent with adenocarcinoma of the prostate (Figures 1 and 2). PSA level at the time was 0.14 ng/ml.

Two months later, the patient was readmitted for acute obstructive renal failure (creatinine 6.3, urea 133). A right nephrostomy catheter was inserted. Progression of the bone metastases was confirmed. Although the patient was alive four months after diagnosis of the subcutaneous metastasis, his performance status had deteriorated progressively.

## DISCUSSION

Skin metastasis in prostate cancer is rare, with an incidence of less than 1%. Only 50 cases were identified in the literature from Spain, the most recent in 2001 (6).

Skin metastases are asymptomatic or course with mild, inflammatory type clinical manifestations, although the manifestations may have an ostensive appearance (7). We were impressed by the fact that all the cases of skin metastasis reviewed were accompanied by high PSA level,\* in contrast with our patient. The low PSA level of our patients could be attributed to a type of high-risk tumor that exhibits a metastatic phenotype in which differentiation is toward neuroendocrine cells that do not produce PSA (8). Such cases have a short survival because the disease is terminal and disseminated.

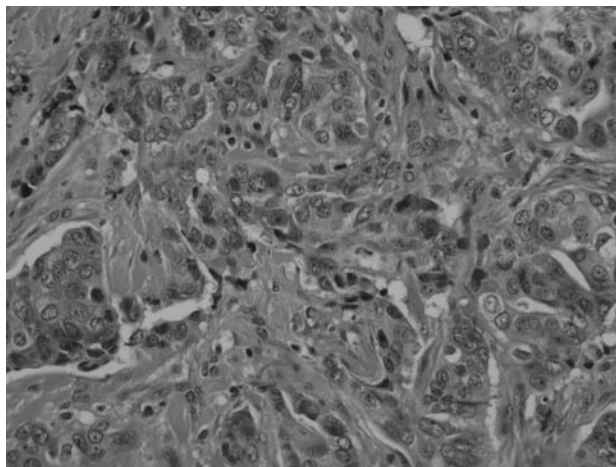


FIGURE 1.

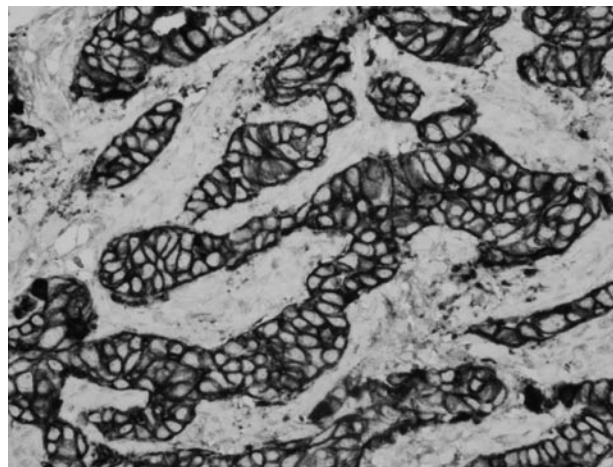


FIGURE 2.

## CONCLUSIONS

Subcutaneous and cutaneous metastases are rare in prostate cancer, although they may be more common than believed because PSA level may not rise and the clinical course can be practically asymptomatic. In any case, metastasis development in the skin and subcutaneous tissue indicates a somber disease prognosis with a survival of less than 6 months (9).

## REFERENCES AND RECOMENDED READINGS

(\*of special interest, \*\*of outstanding interest)

1. Jemal A, Siegel R, Jemal A, Siegel R, Ward E, Hao Y, Xu J, et al. Cancer statics 2008. CA Cancer J Clin, 2008; 58; 71-96.
2. INE. Defunciones según causa de muerte en 2006. <http://www.ine.es/inebase>.
- \*3. Walsh P C. Anatomía patológica de la neoplasia prostática. En Campbell's Urology. 8ª ed en español. 2002 Tomo 4 pág.3313-33. Ed. Panamericana. Buenos Aires.
4. Rodríguez Alonso A, Domínguez Freire F, Pérez García D, Ojea Calvo A, Alonso Rodrigo A, Rodríguez Iglesias B, et al. Metástasis de adenocarcinoma prostático en saco herniario. Aportación de un caso. Actas Urol Esp, 1999; 23 (8): 717-19
- \*\*5. Gallego Sánchez JA, Astobieta Odriozola A, Alvarez Martínez J, Ibarlucea González JG, Larrinaga Simón J, Bernuy Malfaz C. Metástasis cutánea como primera manifestación de adenocarcinoma de próstata. Actas Urol Esp, 1998; 22 (9): 770-2
- \*\*6. Pascual Regueiro D, Andrés Lázaro V, Borque Fernando A, Allepuz Losa C, Azua J, Rioja Sanz LA. Metástasis cutáneas de cáncer de próstata de larga evolución. Actas Urol Esp, 2001; 25 (3): 218-221.
- \*\*7. Bailey, C, Broadbent, A. Cutaneous metastases of prostate Cancer. Journal of palliative medicine. Aug; 10 (4): 980-2.
- \*8. Eisenberger MA, Carducci MA. Quimioterapia para el cáncer de próstata resistente al tratamiento hormonal. En Campbell's Urology. 8ª ed en español. 2002 Tomo 4 3527-28. Ed. Panamericana. Buenos Aires.
- \*\*9. Escaf Barmadah S, Capdevila Hernández JM, González Naranjo F. La metástasis cutánea del adenocarcinoma de próstata. A propósito de un caso. Arch Esp Urol. Jun. 1993; 46 (5): 426-8.