

PENILE METASTASES OF PROSTATE CANCER

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SUMMARY – Prostatic adenocarcinoma metastasizing to the penis is rare. A case of prostatic adenocarcinoma with metastases to the glans penis is presented. In this case, penile metastases developed nine years after the diagnosis of prostate cancer with regional lymph node metastasis.

Key words: *Prostatic neoplasms – therapy; Penile neoplasms – therapy; Neoplasm metastasis; Adenocarcinoma*

Introduction

Penile metastases are rare and usually secondary to other genitourinary primary tumors. They have a very poor prognosis, survival ranging from 1 to 24 months, and multiple metastases were identified in all autopsied patients¹.

We present a case of metastatic penile tumor from prostatic cancer with a 2-year follow up.

Case Report

A 64-year-old man presented with acute urinary retention at Department of Urology, Rijeka University Hospital Center, in July 2006. Physical examination revealed painless, white nodules on the penile glans (Fig. 1). There were no palpable lymph nodes. Digitorectal examination revealed enlarged prostate with multiple hard nodules. Suprapubic cystostomy was performed to achieve adequate drainage.

The patient had been previously diagnosed with prostatic adenocarcinoma (Fig. 2a) with regional lymph node metastasis in July 1997 and treatment was started with hormonal manipulation.

On admission (July 2006), prostate specific antigen (PSA) was 333 ng/mL. A wide excision biopsy of

penile lesion was obtained for histopathology, which showed the lesion to be a deposit of poorly differentiated adenocarcinoma (Fig. 2b). Immunohistochemistry showed positivity for PSA (Fig. 2c) and prostate acid phosphatase (Fig. 2d), indicating that the lesion was a metastatic prostatic deposit.

Computed tomography scan showed no evidence of any metastasis in the abdomen. Bone scan was positive. Therapy with oral estramustine phosphate was introduced. On follow up, the patient had no local complications or penile pain.

During February 2008, the patient developed paraparesis. His PSA was 495 ng/mL, bone scan and magnetic resonance imaging showed multiple metastases in pelvic bones and vertebrae. Subsequently, he



Fig. 1. White nodules on the glans penis.

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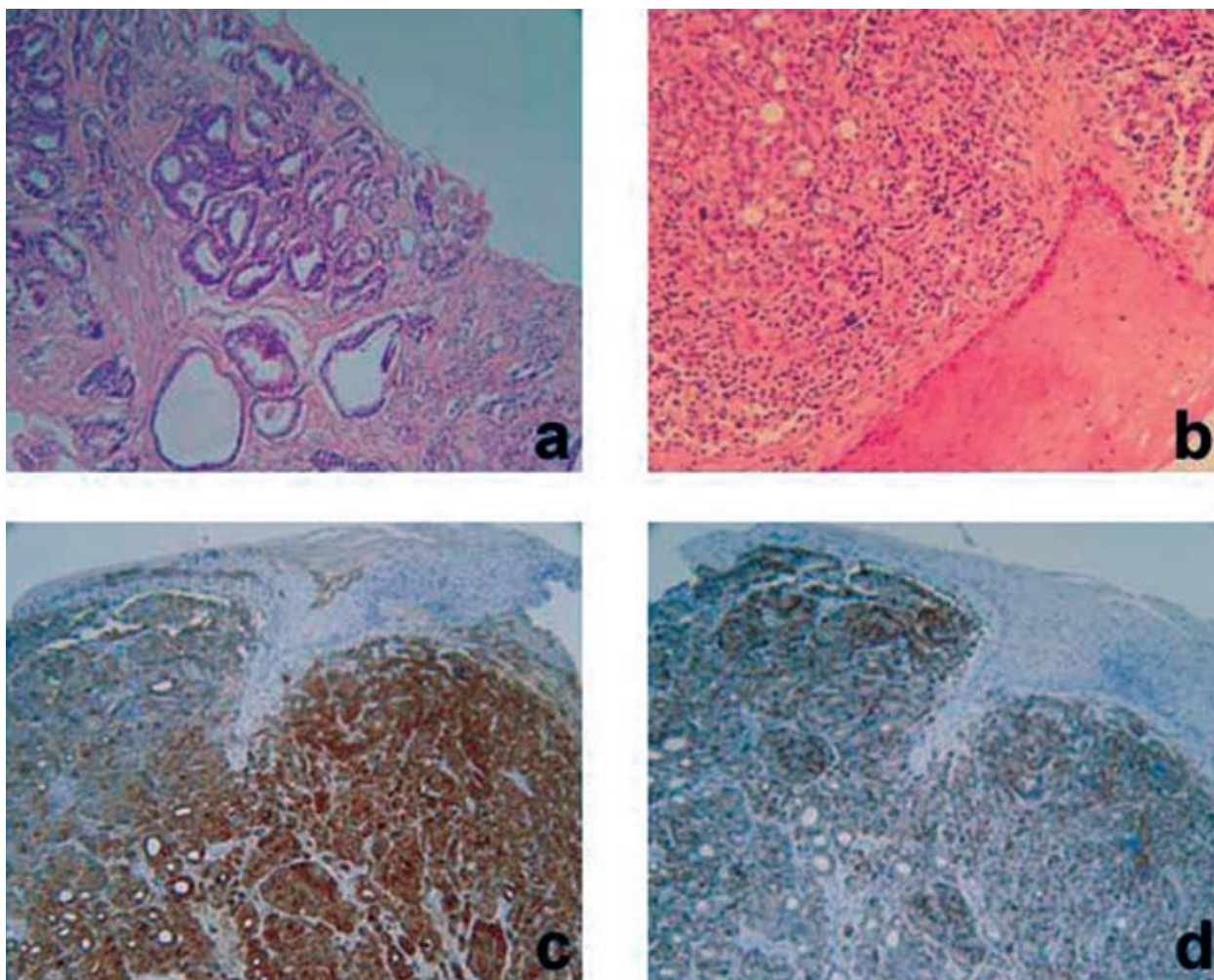


Fig. 2. (a) Prostate biopsy specimen from July 1997 showing prostatic adenocarcinoma, Gleason score 2+3; (b) a wide excision biopsy of penile lesion showing a deposit of poorly differentiated adenocarcinoma; (c) penile lesion immunohistochemistry showing strong positivity for prostate specific antigen; (d) penile lesion immunohistochemistry for prostate acid phosphatase showing strong positivity.

underwent radiotherapy of lesions in cervical and thoracic vertebrae and started mitoxantrone therapy.

Discussion

Metastatic penile tumors are exceptional. In review of the literature, 219 cases of metastases to the penis were identified, among which the most common primaries were genitourinary cancers¹. Metastatic penile cancer from prostate cancer was found in 26 cases. The most common complaint was penile tumor, followed by priapism, pain at erection, and dysuria. It

is of interest that this is the first case where the patient presented with acute urinary retention.

The possible mechanism of prostate cancer metastasis to the penis has been explained by Abehouse and Abehouse as follows: direct invasion, implantation, dissemination through the blood stream, and dissemination through the lymphatic duct². In the present case, prostate cancer may have followed any of the pathways mentioned above.

The presented patient was managed by local excision with wide resection margins and was administered oral estramustine phosphate. Regardless of the

type of therapy used, the prognosis remains poor. In a Japanese report, 71% of patients died within 6 months of diagnosis³.

In conclusion, metastatic prostatic cancer presents with various signs and symptoms and one should keep in mind the possibility of glans penis as the site for metastasis.

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Sažetak

METASTAZE RAKA PROSTATE U PENIS

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Metastaziranje adenokarcinoma prostate u penis je rijetko. Prikazuje se slučaj adenokarcinoma prostate s metastazama u glans penis. U ovom slučaju metastaze u penis razvile su se devet godina nakon dijagnosticiranja raka prostate s metastazama u regionalne limfne čvorove.

Ključne riječi: *Prostata, tumori – liječenje; Penis, tumori – liječenje; Metastaze; Adenokarcinom*

