Case Report

Penile nodule with inguinal lymphadenopathy: Prostatic adenocarcinoma masquerading as penile cancer

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ABSTRACT

Although anatomically the penis is closely related to the prostate, penile metastasis from prostate cancer is an uncommon phenomenon. These patients usually present late in the course of the disease with wide spread metastasis. We report a patient who presented with a penile mass and inguinal lymphadenopathy. He was clinically diagnosed as a case of penile cancer but the penile mass as well as the inguinal lymphadenopathy was subsequently diagnosed to be metastases from carcinoma of the prostate.

Key words: Carcinoma of the penis, carcinoma of the prostate, penile metastasis, prostate cancer

INTRODUCTION

Although prostatic adenocarcinoma is a fairly common disease, penile metastasis from carcinoma of the prostate is rare in spite of anatomical proximity. Despite screening for prostate cancer and frequent use of prostate-specific antigen (PSA) screening many patients are detected quite late. Metastasis from prostate cancer commonly involves pelvic lymph nodes and bones. Patients with penile metastasis usually present with wide spread metastatic disease with dismal prognosis. These patients are usually managed conservatively with emphasis to improve quality of life. Most commonly offered treatment for these patients is androgen deprivation therapy (ADT).[1] We discuss a patient who presented with a penile tumor and enlarged inguinal lymph nodes that was initially thought to be a case of penile carcinoma but was ultimately proven to be metastatic prostate cancer.

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CASE REPORT

A 68-year-old male presented to the urology out-patient department of our institution with a painless nodular lesion over glans penis of two weeks duration. He had also noticed a small swelling on his right groin in the preceding one week. He denied the presence of any lower urinary tract symptoms. There was no history of hematuria or pyuria. On direct enquiry, he admitted that he was having mild low back pain for some time, to which he did not give much attention. On examination, he was in good general condition. There was a well circumscribed erythematous nodular lesion over the glans penis at the parameatal position [Figure 1]. Genital examination did not reveal any other abnormality. A single 1.5 cm, mobile, hard, non-tender right superficial inguinal lymph node was detected [Figure 1]. On digital rectal examination, the prostate was found to be hard and nodular. There was no vertebral or pelvic tenderness. No other abnormality was detected on physical examination. Incisional biopsy of the penile lesion was suggestive of metastatic adenocarcinoma that stained for prostate specific antigen (PSA) [Figure 2] indicating that the primary tumor was prostatic adenocarcinoma. Fine needle aspiration cytology of the inguinal lymph node was reported as metastatic prostatic carcinoma. His serum PSA was 50 ng/ml. Prostatic needle biopsy was suggestive of adenocarcinoma with a Gleason score of 8. Radionuclide scintigraphic bone scan revealed diffuse skeletal metastasis. A diagnosis of metastatic prostatic adenocarcinoma was made and the patient was started on antiandrogen therapy with bicalutamide along with bilateral orchiectomy. He did not come back to our hospital for follow-up but on

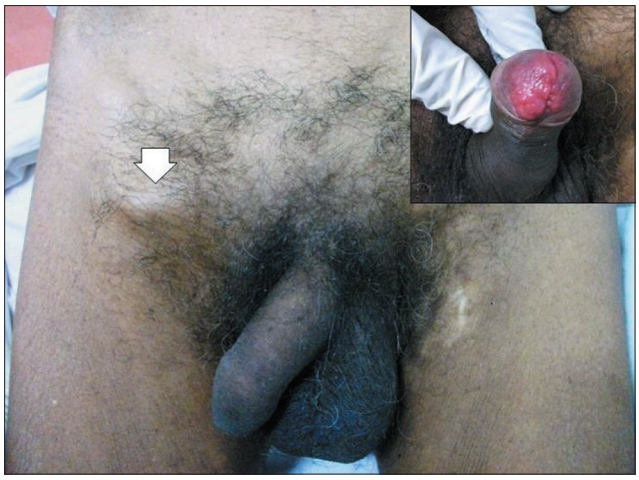

Figure 1: Picture shows gross appearance of the patient with arrow indicating enlarged lymph node. Inset shows penile metastatic nodule

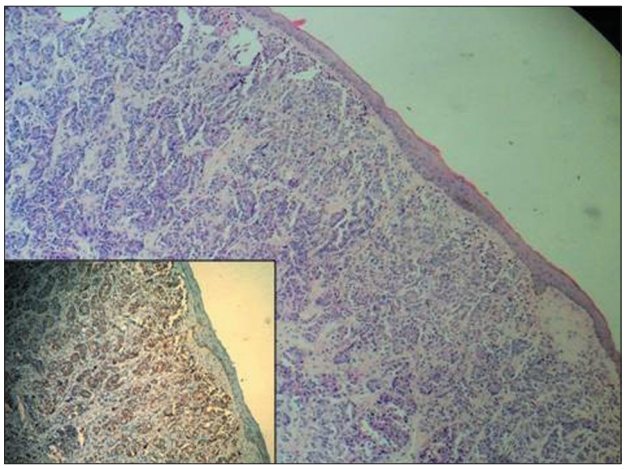

Figure 2: Photomicrograph shows histology of penile metastatic nodule. Inset showing positivity for prostate-specific antigen on immunohistochemical staining

telephonic conversation he reported that there was no change in the size of the lymph node or of the penile lesion nine months after orchiectomy.

DISCUSSION

Prostate cancer usually arises in the peripheral zone of the gland and it may have metastasized widely and silently before urinary symptoms appear.[2] Although penis has a rich and complex vascular supply interrelated to the pelvic organs penile metastasis is relatively uncommon. More so are penile metastases from prostate carcinoma (<0.3%).[3] The most common primaries of these penile metastases originate from the pelvic organs such as the bladder, prostate, rectosigmoid, and kidney.[2,3,4] The most common presentation of patients is a penile mass, while the shaft is the commonest anatomical site involved.[5] Metastatic deposits in the corpus cavernosum and corpus spongiosum also occur occasionally.[2] Metastasis into corporal body may present as priapism. The possible mechanisms of penile metastasis from carcinoma of the prostate are direct invasion, implantation, dissemination through the blood stream or dissemination through the lymphatic duct.[1] In the present case the route of dissemination was most probably via retrograde lymphatic spread from pelvic nodes. The second possible mechanism could be a metastasis from direct involvement of the prostatic urethra. But, since the patient did not have any urinary symptom, it is unlikely to have arisen from prostatic urethral involvement.

The diagnosis of such metastasis is made most consistently by needle core biopsy of the prostate and the suspicious lesion as well; which allows the histological and immunohistochemical correlation of both the primary and the secondary disease. Although the histopathological features of cutaneous metastases from prostate cancer are not well described, architecturally it is comparable to the other skin metastases. The dermis commonly exhibits glandular structures.[4]

Taking into account the extremely poor prognosis, the goal of therapy is usually palliative.[6] The general condition of the patient, the extent of the primary pathology, and the amount of metastases along with symptoms dictate the therapeutic options. The available treatments include local excision of the tumor, partial or total penile amputation, ADT, radiation therapy, or chemotherapy.[1,2] Our patient received ADT in the form of bilateral orchidectomy along with anti-androgens. Whatever be the treatment modality, the prognosis of these patients with penile metastasis are depressing. About 41% to 80% of patients with penile metastasis from prostate cancer die within six months of diagnosis.[4]

Although penile metastasis is a late feature in the natural history of disseminated prostate cancer and not the primary presentation of an occult cancer,[2] our patient presented with only penile nodule and inguinal lymphadenopathy mimicking a primary penile cancer. Only during the routine digital rectal examination the prostatic pathology became evident, which only reinforces the role of routine digital rectal examination in clinical urology. We also want to emphasize that even if the patient presents without any urinary symptom, the clinician should have an open mind and a thorough clinical evaluation should be carried out in all patients presenting with a penile cutaneous mass lesion to avoid misdiagnosis.

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