



PENILE METASTASES PRESENTING AS PRIAPISM IN CARCINOMA PROSTATE- A CASE REPORT AND REVIEW OF LITERATURE

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¹Sweety Gupta, ²Dinesh Singh, ³Sandeep Agarwal, ⁴Sudarsan De. ¹ Consultant, ^{2,3,4} Senior Consultant, Department of Radiation Oncology, Galaxy Cancer Institute, Pushpanjali Crosslay Hospital, Ghaziabad, 201012 (U.P.)

ABSTRACT

Metastatic neoplasms of the penis are uncommon. The most common primary organs have been reported to be the bladder and prostate. In the present report, a patient with priapism was demonstrated to have carcinoma prostate complicated with penile, lung, and liver metastasis in the absence of bone involvement and normal serum PSA levels.

Key Words: Priapism, Carcinoma Prostate, Metastases

CORRESPONDENCE:

Dr Sweety Gupta
56-A, Double Storey,
Patel Nagar-II, Ghaziabad,
PIN-201001
(UP) India
Mob. (91)- 9891981332
E-mail: drsg2411@yahoo.co.in

“Penile metastasis in carcinoma prostate is rare. Priapism as presentation in a diagnosed case of carcinoma prostate should be investigated to rule out metastases”

INTRODUCTION

Metastatic neoplasms of the penis are uncommon despite rich vascularisation and complex circulation. The most common primary organs have been reported to be the bladder and prostate. Metastatic tumor to the penis is a rare condition. The most frequent primary sites are the genitourinary tract (70%) and the gastrointestinal system (23%). The bladder and prostate are the most common primary organs. Malignant priapism is seen in 40% of cases. Malignant neoplastic lesions spread to the corpora cavernosa by direct extension, retrograde venous or lymphatic transport, and arterial embolism. Priapism develops as a result of obstruction or thrombosis of the corpora cavernosa or irritation of the neural pathways caused by the metastatic tumor. Additionally, arterial rupture due to tumor invasion may result in high-flow priapism. We present a case report in which patient presented with priapism due to penile involvement, had systemic metastases (lung, liver and penis) in the absence of skeletal secondaries and normal PSA levels.

CASE STUDY

A 73 years male, diagnosed as carcinoma prostate in the year 2002 had undergone bilateral orchidectomy and received Bicalutamide for 2 years. The hormone therapy was stopped after the Serum PSA levels were normal. He was on regular follow up till December 2009 when he presented with complaint of burning micturition. Clinical examination revealed enlarged and hard prostate, rectal mucosa free. Chest X ray and Ultrasound upper Abdomen was normal and MRI pelvis reported enlarged prostate with infiltration into the right seminal vesicle and right posterior urinary bladder wall. Bone scan was normal (Fig:1) and serum PSA was 55.7ng/ml.



Fig:1 99m Technetium-MDP normal Bone scan

In view of local disease he was planned for External Radiation by IMRT for a dose of 70Gy/35fr. One month after completion of radiation he presented with complaint of pain and swelling in the penis. Clinical examination revealed hard and tender penis, diagnosed as priapism. Doppler study reported normal flow in vessels (Fig: 2) and he did not respond to medical treatment.

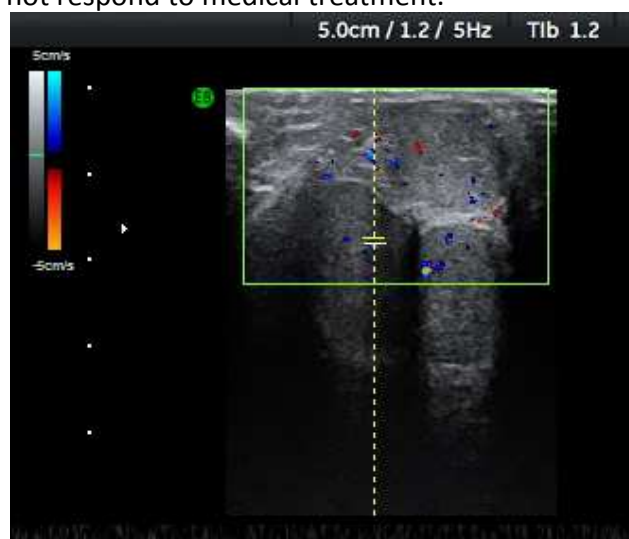


Fig: 2 Doppler study showing normal flow in penile vessels

Subcutaneous nodules were palpable on the penile shaft on the next visit. FNAC from the nodules reported cluster of atypical epithelial cells with focal acinar arrangement, metastatic adenocarcinoma (Fig: 3). Chest X ray revealed multiple lung metastases (Fig: 4). and USG Abdomen reported two hypodense foci in the liver, serum PSA was 4.85ng/ml. He was planned for palliative chemotherapy and till date he had received one cycle of chemotherapy.

Fig:3 FNAC from the penile nodule showing metastatic adenocarcinoma

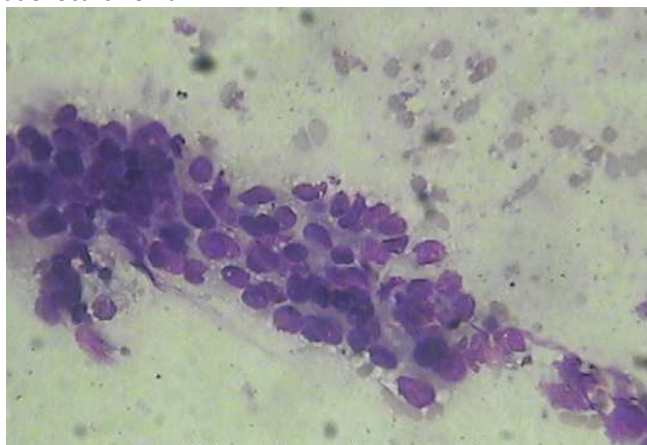


Fig:4 Chest X ray showing bilateral multiple lung metastases



DISCUSSION

Approximately 200 cases of penile metastasis have been documented in the world literature¹ 25% of which arise from primary prostatic cancer². Penile metastases occur in approximately 20% of cases of metastatic prostatic cancer³. Possible mechanisms of tumor metastases include direct spread, retrograde venous spread, retrograde lymphatic spread, direct spread via arteries, spread by means of implantation and by employment of instruments. Most investigators suggest that retrograde venous transportation is the main mechanism involved in the development of secondary penile tumors. Penile metastases are usually a presentation of disseminated cancer⁴. In our patient systemic metastases (lung, liver and penile) were found in the absence of skeletal secondaries. Treatment is often palliative. Return of PSA levels to 4 ng/ml or reduction of > 90% of the pre-treatment levels after appropriate treatment is generally associated with improved survival rates^{5,6}. Anecdotal reports suggest invariably high PSA levels associated with penile metastases⁷. Our patient also had normal serum PSA levels. Normal PSA in the presence of metastatic disease may possibly be explained by diminished tumour antigen expression by the poorly differentiated carcinoma and modulation due to prior androgen therapy, priapism and obstructive uropathy⁸. Our patient presented with penile nodules, though penile nodules, perineal pain and penile edema are seen less commonly. Usually both corpora cavernosa are involved. The glans penis is involved less frequently and the corpus spongiosum is involved rarely. Penile metastasis must be differentiated from Peyronie's disease, traumatic or infectious scar tissue and syphilitic cavernositis. Tissue tumor markers are useful in determining the site of origin of the primary tumor and many immunoperoxidase stains for tumor markers are available, including carcino-

-embryonic antigen (CEA), prostate specific antigen (PSA), prostatic acid phosphatase, (alpha-fetoprotein and human chorionic gonadotropin (HCG)⁹.The diagnosis can easily be established by biopsy or fine needle aspiration biopsy of the penile nodule. The treatment options available include local excision of the tumour, radiation therapy, bilateral orchidectomy, additional hormonal and/or chemotherapy and, partial or total amputation of the penis. In patients who present with urinary tract outflow obstruction, procedures such as cystostomy or suprapubic catheterisation are of palliative value. Amputation of the penis with urethrostomy formation is to be considered in patients with ulceration, irritating secretion and intractable penile pain for symptom control.

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