

# Penile Metastases In The Presence Of Normal Psa Levels And Negative Bone Scan: A Case Report

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## Abstract

Advanced carcinoma of prostate is usually associated with high PSA levels and bony metastases and there are case reports of cavernosal thrombosis in such patients. Here, we report a case of advanced carcinoma of prostate with diffuse pelvic and pulmonary metastasis and cavernosal thrombosis, however with normal PSA and negative bone scan.

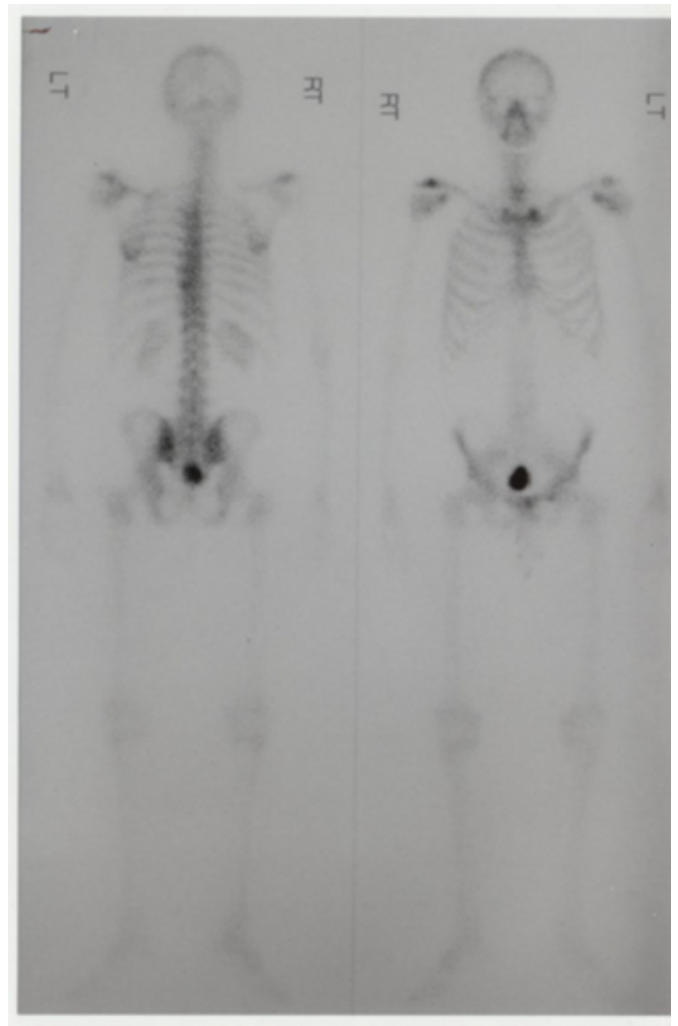
## CASE REPORT

A 65 year old man presented with significant lower urinary tract symptoms, a PSA of 506ng/ml and a T3 prostate tumour on DRE. Following TURP (which confirmed Gleason grade 4+5 adenocarcinoma of prostate) and bilateral orchiectomy, his PSA fell to 1.6 (at 6 months). He remained well and asymptomatic following surgery with PSA levels no higher than 1.8.

Sixteen months after surgery, he presented with a constant perineal pain and was found to have an indurated penis with nodules on the corona of the glans.

MR scanning showed extensive pelvic secondary deposits, a large solid mass arising from prostate and cavernosal thrombosis. There were also widespread lung metastases on his chest x ray. Biopsy of one of the penile nodules revealed poorly differentiated adenocarcinoma of prostatic origin. His isotope bone scan was negative ( it was not a superscan). He was commenced on dexamethasone, analgesia and mitazantrone, but he died a month after his admission, approximately 18 months following his original diagnosis

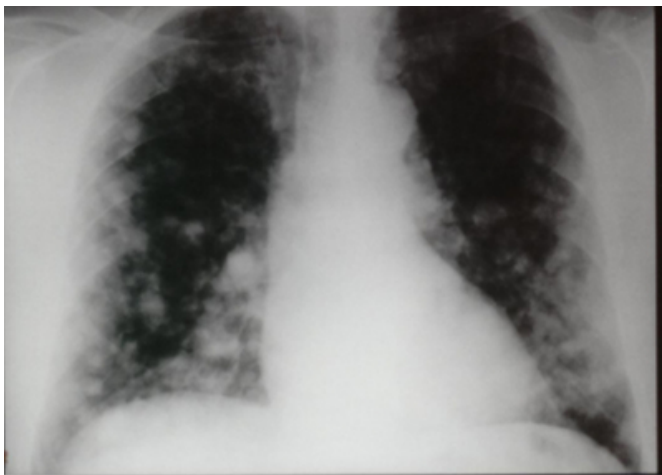
Figure 1



**Figure 2**



**Figure 3**



## DISCUSSION

Approximately 200 cases of penile metastasis have been documented in the world literature (1), 25% of which arise from primary prostatic cancer (2). Penile metastases occur in approximately 20% of cases of metastatic prostatic cancer (3). 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. Penile metastases are usually a presentation of disseminated cancer

(4). In our patient systemic metastases (lung and penile) were found in the absence of skeletal secondaries.

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). In our patient, despite a demonstrated fall in PSA after orchiectomy, survival was only 18 months.

Anecdotal reports suggest invariably high PSA levels associated with penile metastases (4,7). In a review of penile metastases 4 out of 20 patients had isolated metastases to penis (3). 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 (6,8).

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