

# Priapism and Penile Metastases from Transitional Cell Carcinoma of the Bladder

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## Abstract

The poor prognosis of high grade muscle invasive transitional cell carcinoma (TCC), of the bladder is likely secondary to the presence of micro-metastases at the time of diagnosis. This is reflected by modest improvements in 5 year survival figures despite aggressive multimodal therapy for this aggressive cancer.

We present two cases which highlight the importance of regular clinical evaluation for metastatic disease.

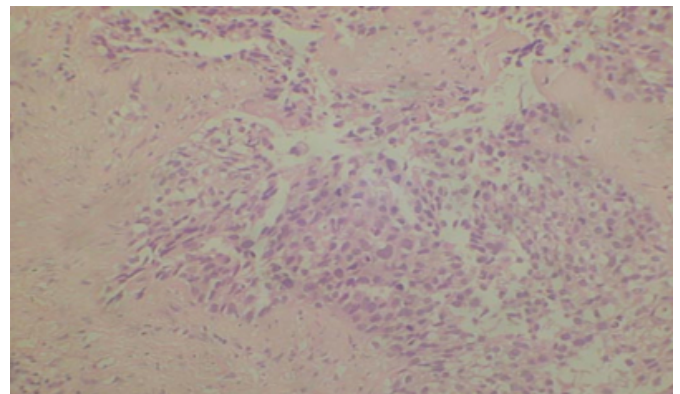
## CASE 1

A 73 year-old man with past history of Alzheimer's disease and COPD, presented to our unit with painless frank haematuria. Cystoscopy revealed a solid lesion on the base of the bladder which was resected to muscle. Histology showed high grade transitional cell carcinoma with muscle and vascular invasion (pT2a). CT Scans of chest, abdomen and pelvis showed no evidence of local, nodal or distant metastatic spread. The patient, being unfit for cystectomy was treated with radical radiation therapy and post treatment cystoscopies showed no evidence of recurrent disease.

At 13 months he presented with a 2 months history of painful priapism. Attempted aspiration of the corpora cavernosa was unsuccessful and operative findings were of a dense fibrotic tissue within the corpus cavernosum with minimal back bleeding. Core biopsies taken via the glans showed metastatic transitional cell carcinoma. [Fig 1]

## Figure 1

Figure 1: Advanced metastatic deposition of TCC in corpus cavernosum.



Subsequent MRI and CT imaging showed no evidence of local invasion but did reveal pulmonary metastases. The patient was sent for palliative local radiotherapy to the penis and achieved reasonable decompression and pain improvement.

## CASE 2

A 75 year old man presented with haematuria and was found to have muscle invasive TCC Bladder. Metastatic work up was negative and he opted to undergo cystectomy and ileal loop diversion. Histology showed high grade TCC stage T3a, No, M0. The patient declined the option of adjuvant chemotherapy.

Six months later he presented with a mass on the base of his penis and a mass on the lateral aspect of the glans penis. At operation the glans mass was found in fact to be in the

corpora cavernosa. Histology of this lesion confirmed metastatic transitional cell carcinoma. The patient was treated with palliative local radiation therapy with partial resolution of both lesions.

### **DISCUSSION**

Metastatic disease involving the penis is rare. There are even fewer references to clitoral priapism of metastatic origin. Of some 300 cases of penile metastases in the literature 35% were secondary to TCC of the bladder.

One such case report describes a metastatic deposit in the cavernosal urethra extending into the corpus spongiosum. This patient had trans-urethral resection and subsequent Adriamycin instillation to a Grade III, pT1a bladder transitional cell carcinoma one year previously. He promptly underwent partial urethrectomy and had systemic chemotherapy but died from local and metastatic spread within 4 months. [1]

A second case describes metastatic corpus cavernosal deposits from a Grade II, pT2, Nx, M0 lesion in the left renal pelvis diagnosed at left nephroureterectomy 8 years previously. This patient was considered disease free at regular endoscopic and radiological screenings until presenting with a painful lesion of his glans penis. He had concurrent pulmonary metastases at this time. [2]

Although remaining rare, unusual metastatic sites for urothelial carcinoma are documented. These sites include cardiac, small bowel and salivary glands. [3,4,5]

Despite being a highly vascular organ, secondary deposition in the penis from other tumours is rare. However, considering these rare cases, about 70% of secondary cancers in the penis have origin in either the bladder or prostate. [6,7,8] The remaining cases are mainly from the kidneys and lower gastro-intestinal tract. As with our case priapism in urogenital cancers often heralds the presence of corpus cavernosal metastases and should be considered a metastatic sign until proven otherwise. Diagnosis is made by the presence of neoplastic cells which bare no resemblance to that of primary penile neoplasia. A pagetoid pattern of

infiltration is seen particularly with transitional cell carcinoma of the urinary tract and this should be differentiated from primary Paget's disease of the penis. [9,10]

### **CONCLUSION**

Metastatic spread of TCC to the penis may be associated with penile pain, penile mass or priapism. The morbidity of this distressing condition may be minimised by early detection. These cases highlight the metastatic potential and unpredictable nature of transitional cell carcinoma of the bladder and the importance of routine clinical evaluation for penile spread.

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