

## Penile Metastases from Bladder Carcinoma

Sir,

Cutaneous metastatic lesions, on the penis are extremely rare (1-3). Typically, they are associated with an advanced stage of the disease and a poor prognosis. A recent review of the literature showed that 75% of the primary tumours are of genitourinary origin, the most frequent site being the bladder (2). However, carcinomas of the gastrointestinal and respiratory tracts, lymphomas and bone tumours have also been reported to metastasize to the penis (2, 4). We describe one additional case of penile metastases arising from bladder carcinoma.

### CASE REPORT

A 60-year-old man presented with nodular, non-ulcerated, violaceous lesions on the penis. One year earlier, bladder carcinoma (ST T3b, G3) had been diagnosed and he was treated with total cystectomy. Physical examination revealed pea-sized, hemispherical, firm, asymptomatic nodules, two of which were located on the glans and one on the shaft of the penis (Fig. 1). Inguinal lymph nodes were not enlarged.

Microscopic examination of one of the nodular lesions revealed a dense diffuse infiltrate throughout the entire dermis. Neoplastic cells showed no tendency to epidermotropism. Higher magnification detected cytomorphologic features of large cells with eosinophilic cytoplasm and large basophilic nuclei, and foci of squamous metaplasia (Fig. 2). Vascular spaces were extensively infiltrated by neoplastic nests. The mitotic rate was high. Results of immunohistochemical staining (immunoperoxidase technique) with monoclonal antibodies

against tissue polypeptide antigen (TPA), pan-cytokeratins (CKs), CK8, CK18 and CK19 were positive. Carcinoembryonic antigen reaction was negative.

At this time, the patient complained of progressive weakness, anorexia, lumbar and lower extremities pain. Magnetic nuclear resonance of the spinal backbone showed hypodense, irregular areas located on L2-L5, D12 and D11 vertebrae, consistent with a diagnosis of bone metastases. Computed tomographic scans of the chest and abdomen were negative.

Based on clinicopathological findings, a diagnosis of penile metastases was made. The patient died of widespread disease 2 months after our observation. An autopsy was not performed.

### DISCUSSION

Clinical features of metastasis to the penis are diffuse penile induration, single or multiple, rarely ulcerated, nodules (2, 3). The lesions usually involve the shaft of the penis; less often, as seen in our patient, they are located on the glans (5-8). Signs and symptoms of penile metastases consist of urinary retention, dysuria, haematuria, priapism and penile pain. The clinical differential diagnosis may include primary tumours of the penis, true priapism, Peyronie's disease, tuberculosis and unspecific inflammatory lesions. In our patient, the past medical history was remarkable for bladder carcinoma.

Urinary bladder tumours are most frequently of epithelial origin. Approximately 93% of the primary bladder cancers



Fig. 1. Metastatic nodule on the glans from urinary bladder carcinoma.

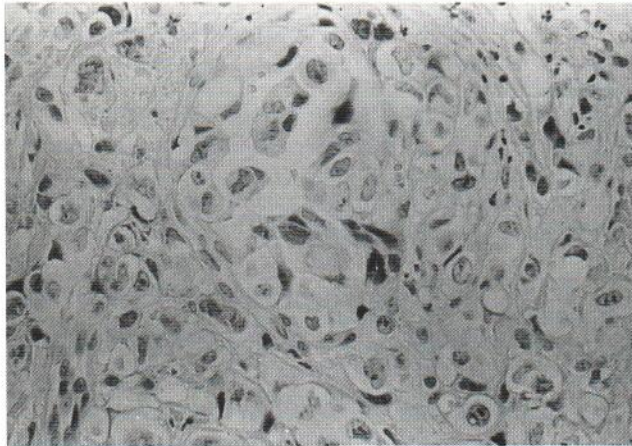


Fig. 2. The infiltrate is composed of large cells with prominent nuclei and abundant eosinophilic cytoplasm (hematoxylin-eosin stain;  $\times 250$ ).

metastasizing to the skin show the transitional cell type; the remaining are squamous cell carcinoma, adenocarcinoma and signet-ring adenocarcinoma (2, 6, 7, 9–11). Histological findings of the cutaneous lesions are usually similar to those in the bladder. In our patient, microscopic features of transitional cell carcinoma were associated with foci of squamous metaplasia. Immunohistochemical positive reaction of neoplastic cells for TPA and CKs allowed to ascertain the epithelial origin of the primary tumour. Once the metastasis to the penis

is discovered, most patients, such as ours, have a poor prognosis. Haddad (5) reported that the average survival time from the diagnosis of penile metastases to death is 3.9 months. However, longer-term survivals have been observed after adequate local treatment and systemic chemotherapy (4).

The mechanism of metastatic spread from the bladder to the penis is still controversial. The most likely routes are retrograde venous and lymphatic spread or perineural extension, although other possible mechanisms are direct extension, arterial dissemination and instrumental implantation (5, 7, 8).

In conclusion, metastases to the glans penis from bladder carcinoma are rare. In our patient, an unusual association of transitional cell carcinoma and foci of squamous metaplasia could be detected histologically.

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