

## Penile Epithelioid Sarcoma

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### Key Words

Penile neoplasm · Penis · Epithelioid sarcoma

### Abstract

Epithelioid sarcoma is a rare mesenchymal neoplasm. We had the opportunity to report a case of epithelioid sarcoma of the penis.

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A 38-year-old man referred to our clinic with a 2-year history of scrotoperineal and erectile pain and a nodular firm mass (3 × 2 cm) at the distal penis on the perineum. The nodule was fixed to the corpora without skin involvement. No inguinal lymphadenopathy could be appreciated. Two years ago the patient visited a urologist and without having a proper physical examination he was diagnosed as having left varicocele (due to scrotal pain) and underwent left varicocelectomy. After the operation because the pain persisted he was treated for chronic prostatitis. 1.5 years later, the patient underwent an incisional biopsy from the mass and pathology reported a malignant tumor. The patient then referred to the urology service at our university. In order to have a proper diagnosis, we performed penile ultrasonography and penile MRI.

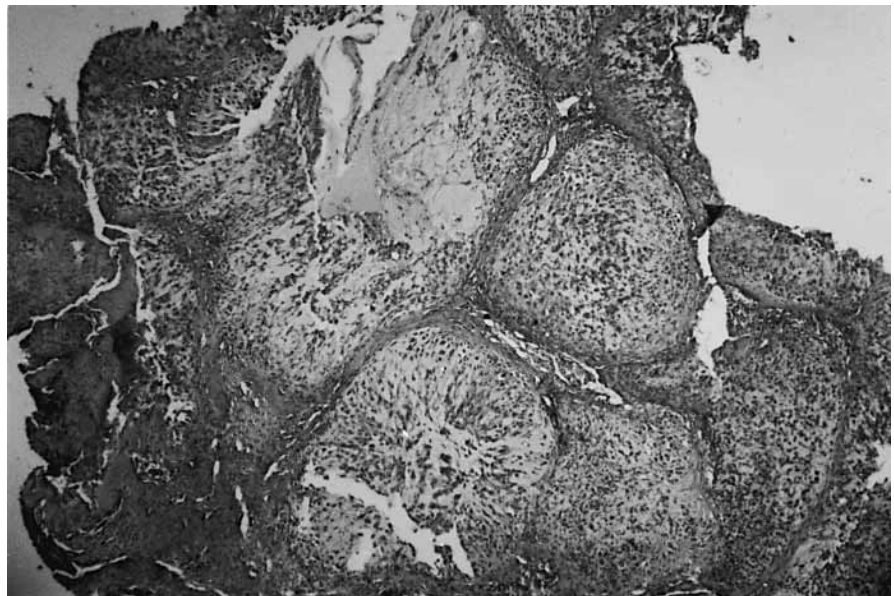
Penile ultrasonography revealed a 2.5 × 2 cm solid mass at the left corpus cavernosum on radix penis and a

1.5 × 1 cm solid mass of the right corpus cavernosum on radix penis without urethral invasion. Penile MRI (fig. 1) also revealed the same findings as penile USG and metastatic evaluation was negative. The patient underwent partial penectomy with total resection of the tumor. The tumor was palpably firm, extended from left crus to right crus penis. Frozen section examination revealed normal histology at both resection sides.

On macroscopic examination of the partial penectomy material there was a tumoral nodule measuring 2.5 cm at its greatest dimension, characterized with gray-white solid areas admixed with brown hemorrhagic and also minute hard bony areas. On microscopic examination, both the biopsy specimen and the tumor found in the penectomy material were characterized by multiple nodules with central mixoid areas and also associated with hemorrhagic areas. The nodules were separated from each other by various amount of fibrous tissue some of which were infiltrated focally with inflammatory cells. In addition, chondroid metaplasia with calcification and bone formation were present in some of these fibrous septa. Most of the tumor cells showed prominent epithelioid features with oval, polygonal or fusiform deeply eosinophilic cytoplasm and vesicular nucleus. Some areas showed transition from these eosinophilic epithelioid tumor cells to fusiform tumor cells. Scattered multinucleated giant cells and a few mitotic figures were also detected. On histochemical examination reticulin fibers were found surrounding the



**Fig. 1.** Penile MRI shows a solid mass of the penis involving the bilateral corpus cavernosum without urethral invasion.



**Fig. 2.** Nodular pattern of the tumor with mixoid background and central necrotic areas. HE.  $\times 40$ .

tumor nodules and also each of the tumor cells with reticuline stain. At immunohistochemical examination, the tumor cells stained positive diffusely and strongly with PAN CK, CD 34, NSE; focally with EMA, Vimentin. Some tumor cells also stained weakly with S-100 (fig. 2).

At follow-up 6 months postoperatively, the patient referred to us with two 1-cm-sized solid masses at the incision side. Color Doppler USG revealed them to be recurrent solid lesions. Since the patient refused chemotherapy or radiotherapy, we did not perform them.

### Comment

Epithelial sarcoma is rare malignant soft-tissue tumor and 8 cases have been reported in the penis to date [1–3]. Misdiagnosis is common since it is an infrequent entity. The differentiation from Peyronie’s disease is important if the lesion occurs on the penile shaft [4]. Since in our patient the lesion was at the perineum he had the misdiagnosis of initially varicocele and then prostatitis.

In those few cases reported to date, the 4 patients surviving disease-free have all been treated with partial or total penectomy [1]. Although it can be speculated that surgery is the only proven treatment of choice, we think that some kind of adjuvant therapy (either chemo- or radiotherapy) is needed for those patients.

Atypical presentation of Peyronie's disease and atypical complaints should alert the urologist to perform a biopsy from the lesion for early diagnosis of penile epithelioid sarcoma.

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