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A RARE CASE OF PENILE METASTASIS OF TESTICULAR CANCER PRESENTED WITH PRIAPISM

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Priapism is thought as a condition of penile erection that persists beyond or is unrelated to sexual stimulation. Commonly two different entities of priapism are known, one is low-flow priapism and the other is high-flow priapism. It is important to distinguish these two conditions for the subsequent different treatments. We report a rare case of an indistinguishable priapism caused by penile metastasis of testicular cancer.

Key words: Priapism, Penile metastasis, Testicular cancer

INTRODUCTION
Penile metastases of testicular cancers are rare. In addition, priapism caused by penile metastases of other sites is seldom seen\(^1\)-\(^4\). As far as we know, this is the first report of penile metastasis of testicular cancer presenting as priapism. Generally the priapism can be classified into low-flow priapism, and high-flow priapism. The present case demonstrated combined symptoms of high-flow and low-flow priapism, so initially we could not clearly identify our case. We should potentially regard priapism of elderly people as a symptom of penile metastasis in a case of combined type of high-flow and low-flow priapism, in particular, when the patient is tumor-bearing.

CASE REPORT
A 86-year-old man admitted to our hospital with a chief complaint of swelling of left scrotal contents. The ultrasound examination demonstrated a heterogeneous mass lesion in his left testis (6.5×6.5 cm in size). The levels of serum tumor markers were within the normal range (\(\alpha\)-fetoprotein AFP; 1.1 ng/ml, human chorionic gonadotropin hCG; <0.1 ng/ml). Computed tomography (CT) revealed multiple metastatic nodules in the lung. We performed left high-orchiectomy with a diagnosis of left testicular cancer accompanying multiple lung metastases. Histopathological evaluation revealed mixed germ cell tumor of the testis (embryonal carcinoma and mature teratoma) (Fig. 1). We recommended the patient to undergo systemic chemotherapy, but he refused. Four months after the operation, the patient became aware of painless priapism with semiflexible erection (Fig. 2A). On readmission, the patient asked for further investigation to find the cause of priapism. Initially we performed various diagnostic procedures to find the cause of priapism with a faint suspicion of penile metastasis. Doppler ultrasound demonstrated a rapid arterial inflow to the cavernous body. Moreover, selective internal pudendal arteriography revealed a collapse of deep penile artery (Fig. 2B). Both of them were typical of high-flow priapism. In contrast, the repeated gasometric blood analyses of the cavernous body indicated the values of suspicion blood, implied low-flow priapism. We performed various treatment procedures, including 1) adrenomimetics administration to the penile shaft, 2) aspiration of thrombus, 3) thrombolysis therapy using plasminogen activator, 4) shunting method where we created a bypass between corpus cavernosum and corpus spongiosum, and 5) embolization of the collapsed site of internal pudendal artery. However, all these treatment procedures were ineffective. Then we performed biopsy of cavernous body, with a suspicion of penile metastasis. Pathological analysis demonstrated an embryonal carcinoma that was the same histology as his testicular cancer. Voiding disturbance caused by priapism gradually became severe. He strongly refused undergoing suprapubic catheterization, so he finally underwent total penectomy to improve the status of urination. Macroscopically, the metastatic mass was

Fig. 1. Histopathological findings in HE-stained sections Corpus cavernosum was completely displaced by embryonal carcinoma (Original magnification, ×200).
Fig. 2. Findings of priapism. A: appearance of priapism with semi-rigid erection. B: findings of selective internal pudendal arteriography. Black arrow shows a collapse of deep penile artery.

DISCUSSION

Invasive and spread over almost the whole cavernous body. Histologically, we observed aggressive cancer growth with innumerable mitoses. The tumor completely replaced the corpus cavernosum, which was thought to be the cause of failure in finding a mass using MRI. We diagnosed our case as penile metastasis of testicular cancer. After the operation urination was improved dramatically.

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A Rare Case of Penile Metastasis of Testicular Cancer Presented with Priapism

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持続勃起症の原因は主として、動脈性持続勃起症と静脉性持続勃起症とに分類される。これらの分類によって治療法が異なるため、その分類は重要である。分類不能な持続勃起症として経過し、治療途中で精巣腫瘍からの隠蔽転移による持続勃起症であると判明したきわめて稀な症例を経験したので報告する。

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