

Paratesticular Metastasis of High Grade Prostate Cancer Clinically Mimicking Hemato/Pyo-hydrocele

Paratestiküler Metastazla Presente Olan Yüksek Dereceli Prostat Adenokarsinomu

Hikmet Köseoğlu¹, Şemsi Altaner²

¹Başkent University Faculty of Medicine, Department of Urology, İstanbul, Türkiye

²Başkent University Faculty of Medicine, Department of Pathology, İstanbul, Türkiye

Abstract

Secondary metastatic lesions of the testicles are very rare and they originate mainly from prostate adenocarcinoma. They are generally diagnosed incidentally, however, they very rarely manifest as a palpable testicular mass. In this paper, we present, a case of paratesticular metastasis from high-grade prostate cancer clinically mimicking pyo-/hemato-/hydrocele. A 75-year-old man, who had been followed up elsewhere for a huge hydrocele based on scrotal Doppler ultrasonography and scrotal magnetic resonance imaging reporting no suspicion for malignancy, but a pyo-/hemato-/hydrocele was determined to have testicular metastasis originating from prostate adenocarcinoma.

Keywords: Hydrocele, testis, neoplasm metastasis, prostate, adenocarcinoma

Öz

Testisin metastatik lezyonları oldukça nadirdir ve çoğunlukla prostat kanserinden köken almaktadırlar. Genellikle rastlantısal olarak tanı alırlar; ancak çok nadir testiste palpe edilebilen kitle ile belirti verirler. Bu olgu bildirisinde klinik olarak pyo-/hemato-/hidrosel olarak izlenen olguda yüksek dereceli prostat kanseri metastazı bildirilmektedir. Yetmiş beş yaşındaki hasta yapılan skrotal Doppler ultrasonografi ve manyetik rezonans görüntüleme incelemeleri ile pyo-/hemato-/hidrosel tanısı ile izlenmekte iken hidroselin yüksek dereceli prostat kanserinin paratestiküler metastazına bağlı olduğu tespit edilmiştir.

Anahtar Kelimeler: Hidrosel, testis, metastaz, prostat, adenokanser

Introduction

Being a very rare situation with the incidence of 3.3% in all testicular tumors, testicular metastases originate mainly (up to 42-60%) from prostate adenocarcinoma and they are generally diagnosed incidentally with surgical castration for prostate cancer (1,2).

However, it very rarely manifests with a palpable testicular mass in men admitted to urology clinics for lower urinary tract symptoms or predetermined high prostate specific antigen (PSA) values (1,3). Likewise, paratesticular metastases also have been reported to be mainly originating from prostate cancer and, with lesser frequency, from gastrointestinal malignancies (4).

In this paper, we present a patient with huge hydrocele clinically mimicking pyo-/hemato-/hydrocele who was determined to have a malignant hydrocele secondary to paratesticular metastasis originating from prostate adenocarcinoma.

Case Presentation

A 75-year-old man was referred to our urology clinics for prostate biopsy because of his high and recently significantly increased PSA levels. His past medical history was uneventful other than transurethral resection of the prostate and synchronous ileus operation with appendectomy. He had been previously followed elsewhere with PSA levels which were 0.57 ng/mL in August 2007, 1.40 ng/mL in January 2010, 4.31 ng/mL in August 2014 and 15.34 ng/mL in April 2015. His physical examination revealed

Correspondence: Hikmet Köseoğlu MD, Başkent University Faculty of Medicine, Department of Urology, İstanbul, Türkiye

E-mail: hikmet.koseoglu@gmail.com

Received: 24.06.2015

Accepted: 31.08.2015

Cite this article as: Köseoğlu H, Altaner Ş. Paratesticular Metastasis of High Grade Prostate Cancer Clinically Mimicking Hemato/Pyo-hydrocele. J Urol Surg 2017;4:26-28.

©Copyright 2017 by the Association of Urological Surgery / Journal of Urological Surgery published by Galenos Publishing House.



bilaterally firm and nodular prostate with digital examination and huge firm hydrocele not permitting evaluation of the left testicle, and minimally atrophic right testicle. The patient has been elsewhere prescribed antibiotics for pyo-/hemo-/hydrocele after clinical evaluation with scrotal Doppler ultrasonography, scrotal magnetic resonance imaging (MRI) and biochemical studies including α -FP, β -hCG and lactate dehydrogenase (LDH). Scrotal ultrasonography performed for scrotal pain nine months ago revealed that the left testicle was atrophic without any solid or cystic lesion within the scrotum. However, a recent scrotal ultrasonography performed for enlarged left scrotum suggested 5x7 cm wide pyo-/hemo-/hydrocele which included echogenic particles and was surrounded by thin rim of tissue having poor blood flow with Doppler examination. The left atrophic testicle was deviated to inferomedial aspect of the cystic lesion. Scrotal MRI revealed an atrophic left testicle measuring 24x24x10 mm in size with a 48x60x81 mm minimally heterogeneous contrast-enhanced lesion with medially large cystic cavity fulfilling the left hemiscrotum suggesting an infected epididymal cyst or intrascrotal abscess-related lesion (Figure 1). His biochemical studies including α -FP, β -hCG and LDH were within the normal limits.

Though not confirmed radiologically, the left hydrocele was suspected of being malignant hydrocele. Therefore, radical inguinal orchiectomy together with 12-core transrectal ultrasound-guided prostate biopsy was performed. Macroscopic examination of the radical orchiectomy revealed a cystic wide cavity with tumoral mass inferiorly deviating to the atrophic testicle (Figure 2).

Histopathological examination of the prostate biopsy specimens revealed Gleason pattern 5+4 prostate adenocarcinoma in all biopsy cores. Histopathological examination of the radical orchiectomy specimens demonstrated metastatic adenocarcinoma of the prostate showing reactivity with PSA and keratin without any positive reactivity with calretinin, CD117, CD30, vimentin, inhibin, octamer-binding transcription

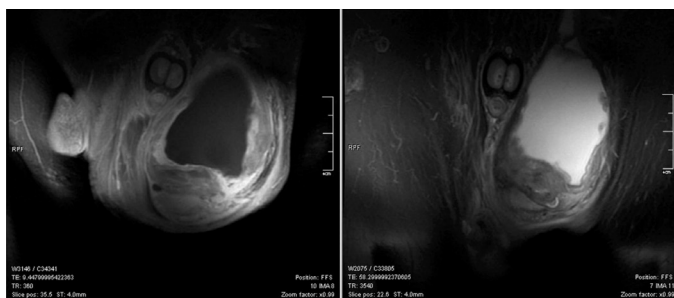


Figure 1. Magnetic resonance imaging coronal section views of scrotum showing 48x60x81 mm minimally heterogeneous contrast enhanced lesion with medially large cystic cavity fulfilling the left hemiscrotum suggesting infected epididymal cyst or intrascrotal abscess related lesion (on the left side) T1 weighted image; (on the right side) T2 weighted image

factor 3/4 or placental-like alkaline phosphatase (Figure 3). Thereafter, the patient was clinically staged as T2cN0M1c with thoraco-abdominal computed tomography (CT) and whole body bone scan. CT showed minimally increased ascites and suspicious omental thickening suggesting peritoneal carcinomatosis. The patient underwent an ultrasound-guided needle aspiration of ascites which was found to contain malignant epithelial cells. Then, right scrotal orchiectomy was performed to provide surgical castration for metastatic prostate cancer and the patient was referred to the medical oncology department

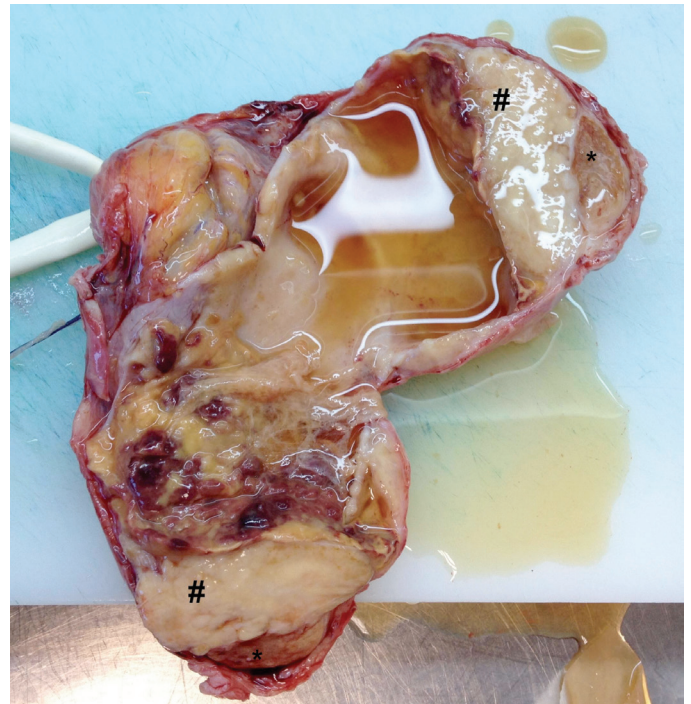


Figure 2. Macroscopic view of inguinal left orchiectomy specimen: a cystic wide cavity with tumoral mass (designated with #) inferiorly deviating atrophic testicle (designated with *) more inferiorly

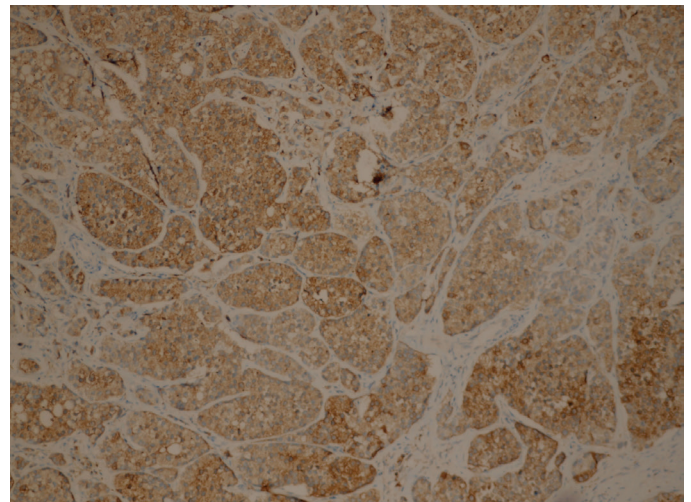


Figure 3. Histological view of neoplastic cells showing diffuse and high level of prostate-specific antigen positivity (magnification x200)

for earlier chemotherapy. The patient gave written informed consent for publication of the clinical and surgical images.

Discussion

Testicular and paratesticular metastases have been shown to originate mainly from prostate adenocarcinoma (1,2,4). In addition, they are generally diagnosed incidentally during surgical castration for prostate cancer. Very rarely, they manifest with a palpable testicular mass and these cases are usually solitary, unilateral tumors simulating primary neoplasms (1,3). Our case was interesting in that recently developed, firm huge hydrocele simulating pyo-/hemato-/hydrocele, radiologically raised clinical suspicion of malignant hydrocele resulting from primary testicular neoplasm or paratesticular primary neoplasms in the setting of atrophic testis. Therefore, we performed left inguinal radical orchiectomy. Histopathological examination revealed metastasis from poorly differentiated prostate cancer. Our case was with unilateral metastasis as generally encountered in such cases (1). However, in the literature, bilateral testicular metastases originating from prostate adenocarcinoma have also been reported (5,6). These metastases, either as incidental or palpable mass, may be synchronous or metachronous in accordance with timing related to the diagnosis of the primary tumor (1,2,3,5,6,7,8,9,10).

In this case presentation, once again it is confirmed that clinical suspicion and thorough physical examination is a must in the management of the condition. Although rare, in case of suspicious hydrocele formations, any testicular or paratesticular metastases should be ruled out in the follow-up of prostate cancer patients.

Ethics

Informed Consent: It was taken.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Hikmet Köseoğlu, Concept: Hikmet Köseoğlu, Design: Hikmet Köseoğlu, Data Collection or Processing: Hikmet Köseoğlu, Şemsi Altaner, Analysis or Interpretation: Hikmet Köseoğlu, Şemsi Altaner, Literature Search: Hikmet Köseoğlu, Writing: Hikmet Köseoğlu, Şemsi Altaner.

Conflict of Interest/Financial Disclosure: No financial or commercial interests from any drug company or others were taken and there is no relationship of authors that may pose conflict of interest.

References

1. Ulbright TM, Young RH. Metastatic carcinoma to the testis: a clinicopathologic analysis of 26 nonincidental cases with emphasis on deceptive features. *Am J Surg Pathol* 2008;32:1683-1693.
2. Sharma MC, Sudha K, Singh MK, Chahal R, Sood R. Metastatic carcinoma involving the testes. *Indian J Pathol Microbiol* 1996;39:293-296.
3. Rahardjo HE, Umbas R, Sutisna H. Testicular metastases from prostate carcinoma. *Asian J Surg* 2010;33:154-156.
4. Powell BL, Craig JB, Muss HB. Secondary malignancies of the penis and epididymis: a case report and review of the literature. *J Clin Oncol* 1985;3:100-116.
5. Manikandan R, Nathaniel C, Reeve N, Brough RJ. Bilateral testicular metastases from prostatic carcinoma. *Int J Urol* 2006;13:476-477.
6. Kim SO, Choi YD, Jung SI, Oh KJ, Im CM, Kang TW, Kwon D, Park K, Ryu SB. Prostate cancer with solitary metastases to the bilateral testis. *Yonsei Med J* 2011;52:362-364.
7. Deb P, Chander Y, Rai RS. Testicular metastasis from carcinoma of prostate: report of two cases. *Prostate Cancer Prostatic Dis* 2007;10:202-204.
8. Kwon SY, Jung HS, Lee JG, Choi SH, Kwon TG, Kim TH. Solitary testicular metastasis of prostate cancer mimicking primary testicular cancer. *Korean J Urol* 2011;52:718-720.
9. Kusaka A, Koie T, Yamamoto H, Hamano I, Yoneyama T, Hashimoto Y, Ohyama C, Tobisawa Y, Yoneyama T. Testicular metastasis of prostate cancer: a case report. *Case Rep Oncol* 2014;7:643-647.
10. Menon S, Gujral S, Bakshi G, Tongaonkar HB. Bilateral testicular metastasis from prostatic adenocarcinoma mimicking an intertubular pattern of seminoma and expressing Rhamm. *J Cancer Res Ther* 2010;6:97-99.