

Inguino-Scrotal Fistula: A Rare Complication After Radical Orchiectomy for Testicular Tuberculosis Mimicking Testicular Cancer: Case Report

İnguino-Skrotal Fistül: Testis Kanserini Taklit Eden Testiküler Tüberküloz Sonrası Gelişen Nadir Bir Komplikasyon

Adem Emrah COĞUPLUGİL,^a
Emin AYDUR,^a
Erol KOÇ,^b
Zafer DEMİRER^c

^aDepartment of Urology,

^bDepartment of Dermatology,
GATA, Ankara

^cClinic of Urology,
Eskişehir Military Hospital,
Eskişehir

Geliş Tarihi/Received: 21.08.2015

Kabul Tarihi/Accepted: 16.10.2015

The brief of this study was presented as a poster at European Association of Urology South East European Meeting, Belgrade, 2014; and published in the Journal of European Urology Supplement.

Yazışma Adresi/Correspondence:

Adem Emrah COĞUPLUGİL
GATA,
Department of Urology, Ankara,
TÜRKİYE/TURKEY
aemrahco@yahoo.com

ABSTRACT Isolated testicular tuberculosis is a rare clinical condition. A 20 year-old man presented with the complaint of right testicular swelling without clear pain. At physical examination a painless, solid mass was palpated at the lower pole of the right testis with normal epididymis. Tumor markers were normal. Scrotal ultrasonography revealed a heterogen, hypoechogenic solid mass in 33x33x28 mm diameter in the right testis. Abdominal ultrasonography and chest X-ray was normal. Patient was considered as testicular cancer and right radical inguinal orchiectomy was performed. Final pathology report revealed tuberculous orchitis. Antituberculosis treatment was initiated after the pathology report. Inguino-scrotal fistula developed 30 days after the operation. The wound completely healed secondarily after antituberculosis treatment. Genitourinary tuberculosis must be kept in mind for the differential diagnosis of young patients presenting with testicular swelling, especially in countries where tuberculosis is endemic.

Key Words: Diagnosis, differential; testicular neoplasms; tuberculosis, urogenital; fistula

ÖZET İzole testiküler tüberküloz nadir görülen bir durumdur. 20 yaşında erkek hasta ağrısız testiküler kitle şikayeti ile polikliniğimize başvurdu. Fizik muayenede sağ testis alt polde ağrısız, solid kitle palpe edildi ve sağ epididim normal idi. Tümör belirteçleri normal idi. Skrotal ultrasonografide sağ testiste 33x33x28 mm boyutlarında heterojen, hipoekoik görünümlü solid kitle izlendi. Batın ultrasonu ve akciğer grafisi normal idi. Hasta testis tümörü olarak kabul edilip sağ radikal inguinal orşiektomi uygulandı. Son patoloji raporu tüberküloz orşit olarak bildirildi ve arkasından tüberküloz tedavisine başlandı. Klinik ve radyolojik açıdan akciğer ve/veya akciğer dışı tüberküloz varlığı saptanmadı. Orşiektomiden 30 gün sonra sağ inguino-skrotal fistül gelişti ancak tüberküloz tedavisi sonrasında sekonder olarak tamamen iyileşti. Özellikle tüberkülozun endemik olduğu ülkelerde, testiküler şişlik ile başvuran genç hastaların ayrıca tanısında genitoüriner tüberküloz akılda bulundurulmalıdır.

Anahtar Kelimeler: Tanı, ayırıcı; testis neoplazileri; tüberküloz, ürogenital; fistül

Türkiye Klinikleri J Urology 2015;6(2):53-6

Tuberculosis (TB) is a worldwide health problem with significantly high morbidity and mortality rate. Genitourinary tuberculosis (GUTB) is the second most common site of involvement among extra-pulmonary TB.¹ In males, genital TB involves the epididymis more frequently than the testis and testicular involvement is usually a result of direct invasive epididymitis.² TB orchitis with no epididymal involvement is

doi: 10.5336/urology.2015-47556

Copyright © 2015 by Türkiye Klinikleri

a very rare presentation and it is impossible to differentiate such a swelling from a tumor, especially in countries where TB is endemic.^{2,3} We report a case of inguino-scrotal fistula in a patient who underwent inguinal orchiectomy for isolated testicular TB, which cannot be differentiated from testicular cancer preoperatively.

CASE REPORT

A 20 year-old man presented to our clinic with the complaint of right testicular swelling without clear pain. He had no history of tuberculosis. At physical examination, right testis was found to have increased in volume and a solid, painless mass was palpated at the lower pole of the right testis with normal epididymis. Tumor markers were normal (beta-hCG: <0.100 mIU/ml; AFP: 2.1 ng/ml; LDH: 273 IU/L). Scrotal duplex ultrasonography demonstrated a heterogen, hypoechogenic solid mass in 33x33x28 mm diameter at the lower pole of the right testis, with decreased blood flow. Left testis and bilateral epididymis were found normal by ultrasonography and physical examination. Abdominal ultrasonography and chest X-ray was normal. With these findings, the patient was considered as testicular cancer and right radical inguinal orchiectomy was performed. Scrotal skin was also excised during orchiectomy due to scrotal involvement. Testicular mass was perforated at the time of blunt dissection and mucopurulent leakage from the mass was noted (Figure 1).

Final pathological examination revealed caseous granulomatous orchitis consistent with TB orchitis and acid-fast bacilli was positive in the pathologic specimens. Antituberculosis treatment (included isoniazid 100 mg tb 1x3, rifampycine 300 mg tb 1x2, ethambutol 500 mg tb 1x3 and pyrazinamide 500 mg tb 1x4) was initiated after the pathology report. Intravenous antibiotics (ciprofloxacin 1x200 mg and metronidazole 3x500 mg) were also added to treatment. Inguino-scrotal fistula developed 30 days after the inguinal orchiectomy (Figure 2). Tissue cultures from the wound were obtained for microbiological assessment. Evidence of pulmonary/extrapulmonary TB was not found neither



FIGURE 1: Mucopurulent leakage from the testicular mass.



FIGURE 2: Inguino-scrotal fistula.

clinically nor radiologically. Tissue cultures revealed no bacteria. The wound completely healed secondarily 2 months after the initiation of antituberculosis treatment. Antituberculosis treatment continued 9 months (isoniazid 100 mg tb 1x3, rifampycine 300 mg tb 1x2).

DISCUSSION

TB remains one of the leading infectious diseases worldwide. The usual site of genital involvement is the epididymis. Isolated involvement of testis is very rare. Testicular involvement usually occurs by direct invasion from the epididymis.²

Differential diagnoses of a swollen scrotum include bacterial/viral epididymo-orchitis, hydrocele, spermatocele, testicular torsion, traumatic scrotum, or testicular cancer. Since isolated TB orchitis is a very rare presentation it is impossible to differentiate such a swelling from a tumor.^{2,3} Positive patient history is the cornerstone in diagnosis. A positive culture or histological analysis of biopsy specimens possibly combined with polymerase chain reaction (PCR) is still required in most patients for a definite diagnosis. TB orchitis may be diagnosed by fine needle aspiration cytology, however, it may cause spread of malignant cells to the scrotal skin and thus to lymphatic drainage to the inguinal nodes. Ultrasonography and magnetic resonance imaging (MRI) may be helpful for diagnosis especially in patients with known GUTB. On the other hand, the sonographic pattern of TB epididymo-orchitis is nonspecific and may be seen with non-TB infection, tumor or infarction. With MR imaging, epididymo-orchitis generally demonstrates heterogeneous areas of low signal intensity on T2 weighted images. The combined use of scrotal MRI and urinary PCR may be more valuable for the diagnosis of TB epididymitis, especially in the patient with the previous history of pulmonary TB.⁴

Genital TB in males most commonly involves the epididymis. The usual presentation is a painful, inflamed scrotal swelling. In the acute phase, the inflammatory reaction involves the testis, so it is difficult to differentiate the lesion from acute epididymo-orchitis.² On the other hand, the presentation of an isolated testicular TB without epididymal involvement typically mimicks testicular cancer due to lack of physical and radiological findings consistent with genital TB, as in our case.

History, physical examination, laboratory and radiological findings were all normal and no evidence of tuberculosis was found in our patient.

Antituberculosis chemotherapy is the mainstay in the treatment of GUTB. Epididymectomy should be performed through a scrotal incision in the case of a caseating abscess that is not responding to chemotherapy or a firm swelling that has remained unchanged or increased in size despite the use of antituberculosis chemotherapy. The contents of an caseating abscess should be aspirated in a minimally invasive manner. On the other hand, orchietomy is seldom required.² The diagnosis of genital TB in our case was very challenging because the patient was presented to our clinic with painless testicular swelling and the history, radiologic and laboratory findings of the patient were all consistent with testicular cancer rather than genital TB. So we considered the patient as testicular cancer and performed radical orchietomy through an inguinal incision. Due to perforation of the testicular swelling during dissection, inguino-scrotal fistula developed postoperatively. But the fistula completely healed secondarily after antituberculosis treatment.

Since genital TB is a rare clinical condition, under awareness may lead to a misdiagnosis and/or delayed diagnosis. Clinicians should have a high suspicious index for genital tuberculosis when facing an elderly patient with a chronic scrotal lump, especially radiography suggests either active or inactive pulmonary TB.⁵ But in young patients, a painless testicular swelling especially without any evidence of pulmonary/extrapulmonary TB may be misdiagnosed and mistreated as testicular cancer.

In conclusion, GUTB must be kept in mind for the differential diagnosis of young patients presenting with testicular swelling, especially in countries where TB is endemic. Antituberculosis chemotherapy is the mainstay in the treatment of genital TB. Surgery should be performed through a scrotal incision in cases that are not responding to antituberculosis chemotherapy.

REFERENCES

1. Wise GJ, Marella VK. Genitourinary manifestations of tuberculosis. *Urol Clin North Am* 2003;30(1):111-21.
2. Cek M, Lenk S, Naber KG, Bishop MC, Johansen TE, Botto H, et al; Members of the Urinary Tract Infection (UTI) Working Group of the European Association of Urology (EAU) Guidelines Office. EAU guidelines for the management of genitourinary tuberculosis. *Eur Urol* 2005;48(3):353-62.
3. Joual A, Rabii R, Guessous H, Benjelloun M, el Mrini M, Benjelloun S. [Isolated testicular tuberculosis: report of a case]. *Ann Urol (Paris)* 2000;34(3):192-4.
4. Işen K, Bakır S. Isolated testicular tuberculosis mimicking a testicular tumor. *Ege Journal of Medicine* 2010;49(1):59-62.
5. Lee IK, Yang WC, Liu JW. Scrotal tuberculosis in adult patients: a 10-year clinical experience. *Am J Trop Med Hyg* 2007;77(4):714-8.