

# A Rare Case of Combination Testicular Teratoma and Brucella Epididymo-orchitis

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## ABSTRACT

*Brucellosis is a disease that affects all systems and can present with different clinical presentations, causing difficulties in diagnosis and treatment. Genitourinary system involvement is encountered in 2-20% of cases and usually presents with epididymo-orchitis. It may occur with a mass in the testicle. Therefore, testicular tumor may be overlooked in patients who are Brucella positive. Testicular tumor is one of the most common solid tumors in men between the ages of 15-35 and constitutes 1-2% of all male malignancies (1). Only 2-6% of testicular teratomas are pure teratomas. Pure teratomas can be subclassified into prepubertal and post-pubertal. The prognosis is significantly different between these two age groups. Malignant transformation of teratoma occurs in only 3-6% of testicular germ cell tumors (GCTs) (2). In this case report, a Brucella positive patient who underwent radical inguinal orchiectomy because of scrotal pain, swelling, fistulized purulent discharge, and a testicular mass palpable on physical examination, and whose pathology revealed postpubertal teratoma, is presented.*

**KEYWORDS:** brucella, teratoma, fistula

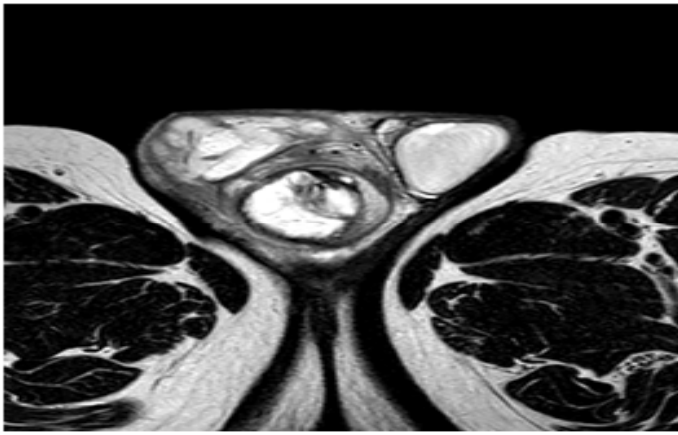
## CASE REPORT

A 53 year old male patient with no comorbidities applied to an external center with complaints of swelling, hardness, redness and increased temperature in the right testicle for 1 week. The patient's scrotal Doppler USG was evaluated in favor of right epididymo-orchitis. Testicular tumor markers alphafetoprotein ( $\alpha$ FP) and  $\beta$ -Human chorionic gonadotropin ( $\beta$ -HCG) were found in normal range. Brucella agglutination rate was found positive for 1/1280. As Brucella epididymo-orchitis treatment, rifampicin 600mg/day and doxycycline 200mg/day peroral was given for 6 weeks. The patient applied to our urology clinic after complaints of testicular pain, mass and discharge symptoms did not improve. On physical examination, fever was 36.5 °C, blood pressure was 120/80 mmHg, pulse: 83/min, right testicle was increased in size and a solid mass was palpated. There was a fistula orificis and discharge in the right scrotum. Other system examinations were normal. In scrotal MRI, a solid mass lesion with a diameter of approximately 39 mm containing a mural solid component was reported. In laboratory tests; white blood cell count was 10500/mm<sup>3</sup>, hemoglobin was 15.6 g/dL, erythrocyte sedimentation rate was 16 mm/hour and C-reactive protein was 5.3 mg/dL (N=0.1-5.0 mg/L). Blood biochemistry, complete urinalysis and tumor markers were within normal range. No lesion were detected in the patient's

thorax and abdomen CT scans. The patient underwent radical inguinal orchiectomy, including the fistula tract, with the pre-diagnosis of testicular tumor that may be associated with Brucella. A tumor containing hair and sebaceous material, measuring 5.5x3.5 cm in size at its widest point, was observed in the cross sections of the testicle macroscopically. Histologically, it was evaluated as postpubertal teratoma with negative surgical margins. The pathology of fistula tract was reported as inflammatory granulation tissue. No recurrence was detected in the patient's 1 year follow-up.



Figure 1. Right scrotum fistula orificis



**Figure 2.** Mass lesion with a diameter of approximately 39 mm containing a mural solid component in an area of approximately 13 mm in diameter in the anterior part of the lesion in scrotal axial MRI



**Figure 3.** Right radical inguinal orchiectomy material

## DISCUSSION

Brucellosis is a systemic infectious disease with heterogeneous clinical spectrum that can affect many organs and systems. Focal infection of brucellosis can affect almost all organs and has been reported 20-40%. Brucellosis involvement is most common among genitourinary system, osteoarticular and local. Unilateral epididymo-orchitis is most common, but in rare cases epididymo-orchitis may also occur bilaterally. Acute scrotum may include trauma, hematocele, testicular tumor, epididymitis and testicular torsion. For differential diagnosis, physical examination and ultrasonography scan are required. Inguinal exploration is mandatory when it is not possible to discard testicular cancer.

In our patient, the right testicle increased in size, was

palpated a diffuse solid mass, and had a fistula. In addition, a lesion compatible with a mass was observed in the MRI. Although the patient was found Brucella positive and received treatment for a sufficient period of time, radical inguinal orchiectomy was performed because malignancy could not be ruled out with clinical and radiological findings. The pathology was reported as postpubertal teratoma.

Cryptorchidism, infertility, trauma, maternal exposure to exogenous estrogen during pregnancy, and infections are among the risk factors for testicular tumors. The majority of adult testicular teratomas are malignant germ cell tumors. Teratoma accounts for 3 to 7% of non-seminomatous germ cell tumors (NSGCT) and approximately 50% of mixed GCT. There are two types of testicular teratoma as stated in the WHO classification. Prepubertal teratoma is considered as slowly progressive tumor and is not associated with germ cell neoplasia in situ, therefore, the spermatogenesis is normal and it has no metastatic potential. This histotype is not specific to children and can also be found in adult patients. Postpubertal teratoma is derived from germ cell neoplasia in situ (GCNIS) and has metastatic potential. It metastasizes in 22- 37% of cases (3).

As a result, any patient with a scrotal lesion may have a malignant neoplasm. A testicular tumor must be excluded even if another disease that may affect the testicles such as brucellosis is diagnosed simultaneously.

## REFERENCES

1. Richie JP. Detection and treatment of testicular cancer. *CA Cancer J Clin* 1993;43:151-175.
2. Carver BS, Al-Ahmadie H, Sheinfeld J. Adult and pediatric testicular teratoma. *Urol Clin North Am* 2007;34:245-251.
3. Williamson SR, Delahunt B, Magi-Galluzzi C, Algaba F, Egevad L, Ulbright TM, Tickoo SK, Srigley JR, Epstein JI, Berney DM., Members of the ISUP Testicular Tumour Panel. The World Health Organization 2016 classification of testicular germ cell tumours: a review and update from the International Society of Urological Pathology Testis Consultation Panel. *Histopathology*. 2017 Feb;70(3):335-346. [PubMed]
4. Kocak I, Dunder M, Culhaci N, Unsal A. Relapse of brucellosis simulating testis tumor. *Int J Urol* 2004;11(8):683-5.
5. Ural O, Dikici N. Brucella epididymo-orchitis: beş olgu sunumu. *Klimik Derg* 2010;23(1):22-5.

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