

Unusual isolated tuberculous epididymitis. Case report

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SUMMARY: Unusual isolated tuberculous epididymitis. Case report.

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We present an unusual case of tuberculous epididymitis in a 33-year-old African patient, who was referred to our Department of Urology with a right intrascrotal mass. There was no evidence of fever, hematuria, dysuria or symptoms from the lower urinary tract. The patient did not demonstrate any laboratory signs of inflammation (white blood

cells, C reactive protein). Scrotal sonography revealed a solid heterogeneous, hypoechoic lesion between the epididymal head and the upper testis pole, with disruption of the architecture of the testicular parenchyma. Strong ultrasound suspicion of tuberculous etiology was confirmed by epididymectomy and partial orchiectomy. The patient started an antitubercular treatment. Although rare, epididymal TB may be the only clinically evident location of infection. Clinical suspicion and prompt diagnosis are important because earlier treatment can prevent complications and lead to clinical improvement.

KEY WORDS: Epididymis - Testis - Epididymal orchitis - Tuberculosis - Surgery - Genitourinary - Ultrasound.

Introduction

The incidence of tuberculosis (TB) has increased worldwide over the past decade. Genitourinary TB represents 2-4% of the TB cases or approximately 15% of TB extrapulmonary manifestations (1). When the genital organs are involved, the epididymis is the most common site, followed by the prostate (2, 3); however, isolated epididymo-orchitis may produce diagnostic difficulty excluding a possible testicular neoplasm (4). While clinical presentation, imaging procedures, in particular sonography and sterile leukocyturia raise the suspicion for genitourinary TB, the diagnosis is confirmed by positive cultures, Ziehl-Neelson stain and/or histologic examination (5).

We report a case of epididymal TB in a 33-year-old man that presented as a right testicular mass.

Case report

A 33-year-old African patient was referred to our Department of Urology because of a right testicular mass. There was no evidence of fever, hematuria, dysuria or symptoms from the lower urinary tract. His medical history was unremarkable and he denied ever being infected with a sexually transmitted disease. The patient reported that he abused neither alcohol nor smoke or took any other drugs.

On the physical examination, we found non tender mass of the right epididymis; it adhered to the testis with an irregular surface. The overlying skin was intact with no erythema. Examination revealed no signs of lymphadenopathy in the groin region and a mild degree of varicocele on the left side. There were no signs of a direct or indirect hernia. The soft prostate was palpable by digital rectal exam, without any abnormal findings. The patient did not demonstrate any laboratory signs of inflammation (white blood cells, C reactive protein). Laboratory tests (complete blood count, including platelets, prothrombin, partial thromboplastin levels, urinalysis) were within normal. He presented a negative test for HIV. Plasma levels of β -hCG (β -subunit human chorionic gonadotropin), α -fetoprotein (AFP), lactic dehydrogenase (LDH) were within normal ranges. At the time of referral to our department, scrotal sonography,

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using a 10MHz linear probe, revealed a solid heterogeneous, hypoechoic lesion (2,4 x 1,8 cm) lying on the border between the epididymal head and the upper testis pole with disruption of the architecture of the testicular parenchyma. The testicular parenchyma immediately adjacent to the mass showed decreased echogenicity compared with the parenchyma elsewhere (Figure 1).

The patient was admitted to the department and treated with intravenous antibiotics for 5 days. Because no resolution occurred in the epididymal mass, the patient was taken into the operating room for scrotal exploration. Gross examination showed multiple caseous material with foci of haemorrhage. Epididymectomy and partial orchiectomy were performed (Figure 2). Histological appearance of the lesion is represented by granulomas composed of dispersed epithelioid cells with histiocytes, macrophages and lymphocytes with large areas of caseous necrosis. Acid-fast bacilli were seen on Ziehl-Neelsen staining of the epididymal tissue. Culture of the diseased tissue was positive for *Mycobacterium tuberculosis* (MTB), confirming the diagnosis of epididymal TB.

The pharmacological treatment for tuberculosis was started, including Isoniazid 300mg, Rifampin 600mg, Pyrazinamide 2000mg and Ethambutol 1200mg daily for two months, Isoniazid and Rifampin continued for a further 6 months.

Discussion and conclusion

Genitourinary TB accounts the 15% of the cases of all extrapulmonary TB (1). It occurs more in men than in women (approximate ratio 2:1), aged 25 to 44 years (6). Tuberculous infection of the scrotum is rare and occurs in approximately 7% of patients with TB (7). Human immunodeficiency virus infection may increase the risk of genitourinary TB (8). TB *Mycobacterium* (TBM) reaches the epididymis by retrograde extension from the prostate and seminal vesicles, but lymphatic and hematogenous spread are also possible. Clinically, patients present frequently with a painless or slightly painful scrotal mass. The irritative voiding symptoms are not as common as other genitourinary TB. Urinalysis shows normal, as in our case, or secondary bacterial infection is commonly present (3). Sonography is currently the best technique for imaging the scrotum and its contents, and it can be used to reliably differentiate between extra and intratesticular lesions (9). The following Ultrasound (US) patterns have been described: diffusely enlarged heterogeneously hypoechoic tuberculous epididymitis, diffusely enlarged homogeneously hypoechoic tuberculous epididymitis and nodular-enlarged heterogeneously hypoechoic tuberculous epididymitis (4,7,10). The fir-

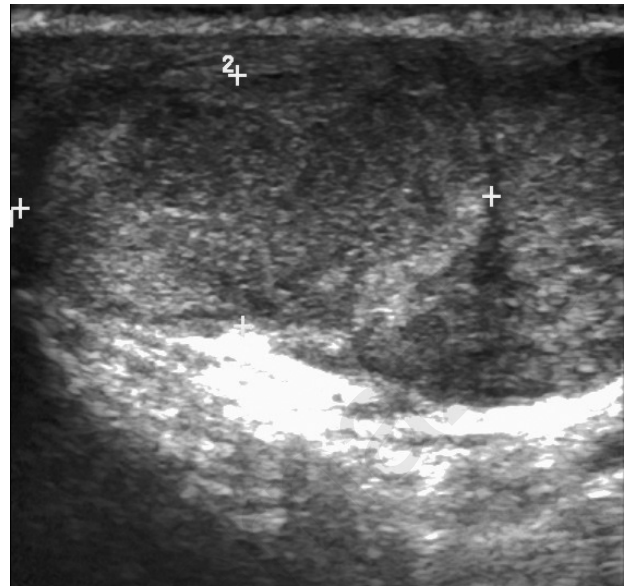


Fig. 1 - Scrotal ultrasound revealing a solid heterogeneous, hypoechoic lesion (2,4x1,8 cm) lying between the epididymal head and the upper testis pole with disruption of the architecture of the testicular parenchyma.



Fig. 2 - Intraoperative finding. Gross examination shows multiple caseous material with foci of haemorrhage.

st pattern was observed in our patient. Calcifications may be present, and they may be a useful differentiating feature.

The major clinical differential diagnoses of tuberculous epididymo-orchitis are testicular tumor, testicular torsion, bacterial epididymo-orchitis. Although both bacterial and tuberculous infections may involve both the epididymis and the testes, according to Chung (4) and Kim (10), finding a heterogeneously hypoechoic pattern of epididymal enlargement favors a diagnosis of TB. Color-Doppler US may be useful to increase diagnostic ac-

curacy. In patients with bacterial epididymitis is seen a diffuse increased blood flow pattern, whereas focal linear or spotty blood flow signals are seen in the peripheral zone of the affected epididymis in subjects with TB (11).

The diagnostic criterion of genitourinary TB is the identification of TBM from urine. However a definitive diagnosis of TB epididymitis is only based on biopsy material obtained from needle aspiration or even epididymectomy (4, 8).

The treatment of the TB epididymitis is essentially conservative. Drug combination has been shown to accelerate the response of treatment and to shorten the time

to cure. An embraced regimen of rifampicin, isoniazid, pyrazinamide and ethambutol is recommended for patients at the initial phase of treatment as standard practice for 6 months, with cure rates >95% (12).

Finally we can say that an adequate evaluation of patients with scrotal mass detected by an abdominal and scrotal ultrasound coupled with biopsy is fundamental to diagnostic accuracy, optimal treatment and possibility of avoiding surgery in patients with epididymal TB. Clinical suspicion and prompt diagnosis are important because an earlier treatment can prevent patient complications and lead to clinical improvement.

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