Journal of Advances in Medical Sciences

Case Report

Late Diagnosis of Isolated Testicular Tuberculosis

Hannaoui Ali*, Elftouhi Hamza, Kbirou Adil, Moataz Amine, Dakir Mohamed, Debbagh Adil and Aboutaieb Rachid

Department of Urology, Ibn Rochd HUC, Casablanca, Morocco.

Correspondence

Hannaoui Ali

Department of Urology, Ibn Rochd HUC, Casablanca, Morocco.

Received Date: 15 October 2024

Revised Date: 29 November 2024

Accepted Date: 07 December 2024

Publication Date: 16 December 2024

Copyright

© 2024 CME Online Library. This is an open- access article distributed under the terms of the Creative Commons Attribution 4.0 International license.

Abstract

Urogenital tuberculosis is a rare condition, typically occurring following pulmonary involvement. Isolated testicular tuberculosis without urinary symptoms is even rarer and poses significant diagnostic challenges. We report a case of a 34-year-old patient diagnosed with testicular tuberculosis after undergoing an orchidectomy due to purulent testicular necrosis.

Case Report: A 34-year-old male with no significant medical history or known tuberculosis exposure presented with acute scrotal swelling three months prior to consultation. Initially diagnosed with acute orchiepididymitis by a general practitioner, he was treated with a two-week course of antibiotics (C3G and doxycycline) with reported clinical improvement. However, symptoms recurred a month later, complicated by a scrotal fistula and suppuration, all in the absence of fever and with preserved general health.

Clinical examination revealed a swollen, inflamed scrotum with an ulceration on the left side and pus discharge. The left testicle was painful upon palpation. Ultrasound showed extensive intraparenchymal necrosis of the left testicle, associated with epididymitis and scrotal lymphoedema. Chest X-ray was normal. Laboratory tests showed an elevated CRP of 99, sterile urine culture, and negative acid-fast bacilli (AFB) smear, with tumor markers also negative. Surgical exploration revealed a severely damaged left testicle with purulent necrosis, leading to an orchidectomy. Histopathological examination confirmed tuberculosis with epithelioid granulomas centered on caseous necrosis.

Discussion: Genital tuberculosis in men often arises from retrograde spread from urinary infections or hematogenous dissemination from distant sites like the lungs. Isolated genital tuberculosis is rare and usually involves the epididymis, presenting as a chronic, antibiotic-resistant epididymitis. The testicular form, as seen in this case, is exceptionally rare and challenging to diagnose, often mimicking testicular tumors or complicated by scrotal fistulas. The primary diagnostic tool is the search for mycobacteria in urine or sperm cultures, though findings can be non-specific. Ultrasound is useful for detecting scrotal abnormalities, but definitive diagnosis often requires surgical intervention and histopathological analysis. Treatment aligns with pulmonary or urinary tuberculosis protocols, involving a six-month regimen of quadritherapy followed by bitherapy. Surgical intervention is generally reserved for complications.

Conclusion: Genital tuberculosis can progress insidiously but destructively, leading to irreversible damage. Early diagnosis is crucial to prevent extensive surgical intervention. It is essential to investigate for urogenital tuberculosis when a patient presents with genital symptoms and to examine the genitals in cases of urinary tuberculosis.

Keywords

Testicular Tuberculosis, Diagnostic Challenges, Ultrasound Findings, Antitubercular Therapy, Late Diagnosis.

INTRODUCTION

Urogenital tuberculosis is a rarely isolated condition, usually preceded by pulmonary involvement. Purely testicular tuberculosis without urinary symptoms is even more exceptional and thus presents a significant diagnostic challenge. We present the case of a 34-year-old patient diagnosed with testicular tuberculosis after undergoing an orchidectomy due to purulent testicular necrosis.

OBSERVATION

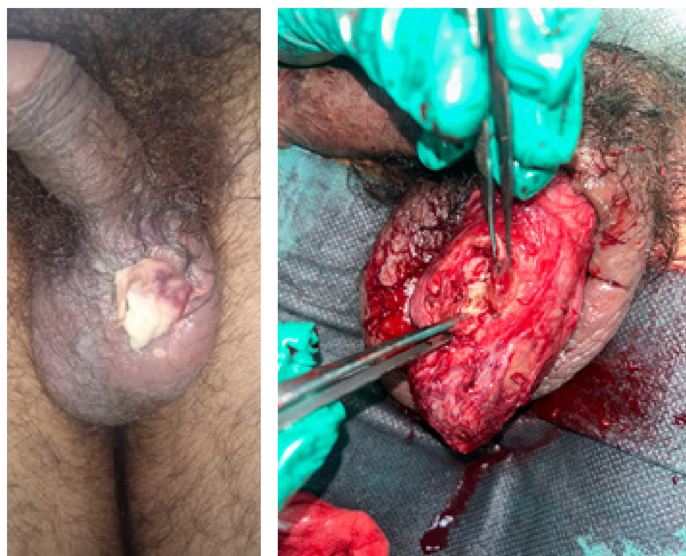
The patient, a 34-year-old male with no significant medical history and no known tuberculosis exposure or risky sexual behavior, presented three months before his consultation with acute scrotal swelling. He had initially been diagnosed with acute orchiepididymitis by a general practitioner

Citation: Hannaoui Ali. Late Diagnosis of Isolated Testicular Tuberculosis. J Advances Med Sci. 2024;1(2):1-2. DOI: 10.52106/3066-344X.1008.

and received a two-week course of antibiotics (C3G and doxycycline), which led to clinical improvement. However, symptoms recurred a month later, complicated by scrotal skin suppuration and fistula, all in the context of afebrile and stable general condition.

Clinical examination revealed a swollen and inflamed scrotum with an ulceration on the left side discharging pus. The left testicle was painful on palpation. An ultrasound showed large necrotic lesions within the left testicle, poorly vascularized peripherally, associated with epididymitis and scrotal lymphoedema. Chest X-ray was normal. Biological tests showed a CRP of 99, a sterile urine culture, and negative acid-fast bacilli (AFB) smear, with tumor markers also negative.

Surgical exploration revealed a destroyed left testicle with externalization and suppuration of the testicular pulp, necessitating a left orchidectomy. Histopathological examination confirmed tuberculosis with the presence of epithelioid giant cell granulomas centered on caseous necrosis.



DISCUSSION

In men, genital infections can arise from the retrograde spread of a urinary infection or hematogenous dissemination from a distant site, such as a pulmonary infection. Isolated genital tuberculosis is rare, representing less than 5% of urogenital tuberculosis cases in men. Epididymal involvement is the most common presentation, manifesting as antibiotic-resistant epididymitis, evolving into chronicity with the formation of a cold nodule, often leading to obstruction of the epididymal duct. Symptoms include scrotal swelling and pain on palpation, with the epididymis becoming hard and painful, complicating diagnosis in the absence of other tuberculous manifestations. Initial presentations can mimic testicular tumors, and in complicated cases, a scrotal-cutaneous fistula may indicate caseous necrosis of the testicle. Testicular and prostatic involvement is often associated with urinary infections, unlike isolated epididymal involvement [1-3].

Diagnostic approaches for urogenital tuberculosis include the search for mycobacteria in urine cultures, although other bacteriological tests like sperm cultures are less evaluated. Ultrasound is effective in examining genital organs, revealing an enlarged, heterogeneous epididymis, sometimes associated with a hydrocele. Testicular ultrasound may show hypo-echoic homogeneous areas within the testicle, but these findings are non-specific. Orchidectomy and epididymectomy are often performed for diagnostic purposes, with tuberculosis diagnosis confirmed post-operatively through histopathological examination revealing granulomas [4-6]. Medical treatment follows protocols for pulmonary or urinary tuberculosis, involving a six-month regimen of quadruple therapy followed by dual therapy. Surgical management is not clearly defined but may be considered in cases of fistula or purulent necrosis [7-11].

Marginal cell lymphoma of the breast is a very rare indolent lymphoma and close follow up was recommended.

CONCLUSION

Genital forms of tuberculosis are characterized by often insidious but destructive progression, leading to irreversible sequelae. While antituberculous treatment is highly effective and can reduce the need for surgery, early diagnosis remains challenging and needs improvement. Thus, genital involvement should prompt a search for urinary tuberculosis, and vice versa, a urinary involvement should lead to a genital examination.

REFERENCES

1. Chandra S, Chandra H, Chauhan N, Gaur DS, Gupta H, Pathak VP, et al. Male genitourinary tuberculosis–13 year's experience at a tertiary care center in India. Southeast Asian J Trop Med Public Health. 2012; 43:364–369.
2. Kulchavenya E, Khomyakov V. Male genital tuberculosis in Siberians. World J Urol. 2006; 24:74–78.
3. García-Rodríguez JA, García Sánchez JE, Munoz ˜ Bellido JL, Montes Martínez I, Rodríguez Hernández J, Fernández Gorostarzu J, et al. Genitourinary tuberculosis in Spain: review of 81 cases. Clin Infect Dis. 1994; 18:557–561.
4. Das P, Ahuja A, Gupta SD. Incidence, etiopathogenesis and pathological aspects of genitourinary tuberculosis in India: a journey revisited. Indian J Urol. 2008; 24:356–361.
5. Yu-Hung Lai A, Lu S-H, Yu H-J, Kuo Y-C, Huang C-Y. Tuberculous epididymitis presenting as huge scrotal tumor. Urology. 2009; 73:1163. e5–7.
6. Myers JN. Miliary central nervous system, and genitourinary tuberculosis. Dis Mon. 2007; 53:22–31.
7. Jacob JT, Nguyen TML, Ray SM. Male genital tuberculosis. Lancet Infect Dis. 2008; 8:335–342.
8. Kim SH, Pollack HM, Cho KS, Pollack MS, Han MC. Tuberculous epididymitis and epididymo-orchitis: sonographic findings. J Urol. 1993; 150:81–84.
9. Chung T, Harris RD. Tuberculous epididymo-orchitis: sonographic findings. J Clin Ultrasound. 1991; 19:367–369.
10. Chen Y, Liu M, Guo Y. Proton magnetic resonance spectroscopy in prostate tuberculosis. Urology. 2010; 75(5):1065–1066.
11. Fillion A, et al. Prise en charge diagnostique et thérapeutique de la tuberculose urogénitale. Rev Med Interne. 2014.