

TESTICULAR SCHISTOSOMIASIS. AN UNUSUAL CAUSE OF ACUTE SCROTAL PAIN

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INTRODUCTION

Acute scrotal pain is a common symptom encountered in surgical practice. Diagnosis of the cause may prove difficult, and delay in commencement of treatment increases morbidity¹. In adults, acute scrotal pain is usually caused by conditions such as testicular torsion, epididymo-orchitis, trauma, Fournier's gangrene and obstructed inguinoscrotal hernia².

This report presents a rare case of testicular schistosomiasis seen in an adult Nigerian male. Two unusual findings are emphasized; the absence of a scrotal mass and acute scrotal pain as the initial presenting symptom.

CASE REPORT

A 40-year-old Nigerian male, married with four children, was admitted to the Emergency Surgical Unit of Aminu Kano Teaching Hospital, Kano, Nigeria, with a 2-hour history of bilateral scrotal pain. The pain had started suddenly, was very severe and dull in nature but was not affected by movement or change in posture. There was associated frequency of micturition, but no dysuria, fever or hematuria. The patients did not have any previous history of urethritis or trauma to the scrotum and had not noticed any swellings in the groin or genital areas.

Over the past one year, the patient had experienced recurrent mild episodes of scrotal pain which was treated with analgesics and antibiotics at various private clinics. At presentation he was afebrile (temperature 36.6 °C), not pale, with a pulse rate of 92/minute, a blood pressure of 130/80 mmHg and a respiratory rate of 18/minute. Examination of the abdomen was unremarkable and the hernial orifices were intact. The scrotal skin was warm and the testes were bilaterally swollen and tender with thickened spermatic cords. The left testicle was also hard in consistency.

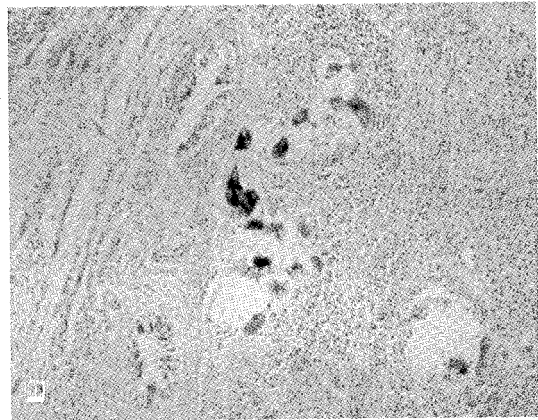


Fig. 1: Section of testis showing several schistosomal ova. Note interstitial fibrosis and loss of seminiferous tubules (H & E x 40)

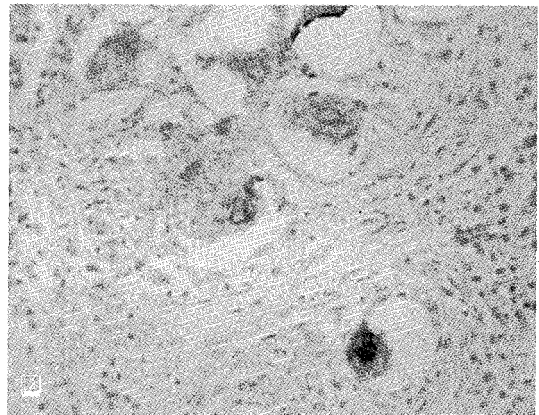


Fig. 2: High magnification showing viable and calcified schistosomal ova with surrounding eosinophils and chronic inflammatory cells (H & E x 160)

A provisional diagnosis of acute scrotum due to acute epididymo-orchitis was made and testicular torsion considered as a differential diagnosis. The patient had an urgent laboratory work up and was prepared for emergency scrotal exploration. His hemoglobin was 13.4 g/dL, while his blood cell count was $9.0 \times 10^9/L$.

Serum urea and electrolytes were within normal reference values and urine microscopy revealed 0-2 pus cells/hpf.

At surgery the testes were found to be slightly enlarged and the left testis was firmer in consistency. The spermatic cords were normal and no features suggestive of torsion were seen. Biopsies of both testes were obtained and sent to the histopathology laboratory for examination.

The biopsy specimens measured 0.8 x 0.5 cm and 0.9 x 0.5 cm from the left and right testis, respectively. They appeared greyish brown and fibrous. Microscopy showed atrophy of the seminiferous tubules and several schistosoma haematobium ova. Surrounding granulomatous inflammation consisting of epithelioid cells, lymphocytes and giant cells was observed as well as areas of fibrosis. The features were more marked on the left side (Fig. 1, 2).

The patient had a good postoperative recovery and was placed on antibiotics and analgesics. Praziquantel (40mg/kg body weight) was given on the fourth postoperative day based on the histopathological findings. The scrotal pain and testicular swelling gradually resolved and the patient was discharged home on the seventh postoperative day. Subsequent follow up in the outpatient clinic has shown a satisfactory recovery. At one year of follow up the patient was fine with his wife expecting a new baby.

DISCUSSION

Genitourinary schistosomiasis is a frequent occurrence in schistosoma endemic regions of the world, and the urinary bladder, ureters, prostate and seminal vesicles are the principal organs that are affected³. Involvement of the testis remains rare and of varied symptomatology^{4,5}. The patients commonly present with a scrotal mass that can mimic testicular malignancy, both clinically and on ultrasonography^{6,7}. Our patient exhibited some unusual features. He presented with acute scrotal pain that necessitated emergency surgical exploration. The testes were found to be enlarged, though no definite mass lesion was demonstrable as has been previously reported⁶⁻⁸. Additionally, the common symptoms of hematuria and dysuria seen in genitourinary schistosomiasis were notably absent and urine microscopy did not demonstrate any schistosomal ova. Feldmeier et al.⁹ suggested hemospermia as a ne-

glected but early tracer symptom of genitourinary schistosomiasis, but this is usually difficult to establish. However, when there is clinical suspicion, it is recommended that seminal fluid be examined microscopically for the presence of schistosomal ova even though this may be of limited value in chronic stages of the infection⁹. Although, in rare instances, testicular schistosomiasis may be a contributory factor to male infertility¹⁰, fertility was preserved in our patient.

In view of the variable presentation of this condition, a high index of suspicion is required when patients present with unusual genitourinary symptoms. In the case of a doubtful diagnosis, ultrasonography has been shown to be the best complementary investigation. Soans and Abel⁵ described the sonographic features to be those of a solid testicular mass with a heterogeneous echo-texture identical to that of most testicular malignancies. Where facilities for frozen sections exist, this procedure can be performed during surgical exploration; when schistosomal granulomas are seen on microscopy, unnecessary orchidectomy can thus be avoided, especially in young patients⁶.

When patients present with acute features, the possibility of combined pathology i.e. epidymo-orchitis with schistosomiasis should be considered. Because of the difficulty in the clinical differentiation of epididymo-orchitis from testicular torsion, colour doppler sonography is very useful for the diagnosis of the acute scrotal process, with a high degree of specificity and sensitivity.¹¹ Radioisotope scan provides a similar high level of accuracy in the differential diagnosis of both conditions.¹² However these facilities may not be widely available and require operator experience and knowledge of the limitations of the procedures. In such situations expedient surgical exploration is advocated.¹³

The therapeutic modality depends on whether a preoperative diagnosis has been established and on the extent of testicular involvement.^{6,7} Praziquantel or Niridazole can be administered, but when a testicular mass is apparent, it can be excised with the testis being preserved.⁶ In cases where the testis is compromised, however, orchidectomy is the treatment of choice.⁷

In conclusion, testicular schistosomiasis is a rare condition that may present with acute scrotal pain mimicking epididymo-orchitis.

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