

A rare case report of bilateral testicular masses as an initial manifestation of systemic sarcoidosis

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Abstract

Sarcoidosis is an idiopathic, systemic disease that rarely involves the genitourinary tract. Here, we present a case of a 40-year-old male presented with bilateral scrotal swelling. The scrotal ultrasound showed multiple echogenic masses bilaterally ranging between 3 mm and 15 mm involving both testicles. Enlarged retroperitoneal lymph nodes were detected on the abdominal computed tomography (CT). Surgical exploration of the testes with a frozen section analysis of the left testicular mass was carried out, and it revealed noncaseating granulomas. CT scan of the chest revealed the classic bilateral hilar and mediastinal lymphadenopathy with reticulonodular infiltrates. The final pathological diagnosis was systemic sarcoidosis with bilateral testicular involvement. Treatment with high-dose corticosteroids resulted in complete resolution of the testicular mass and a significant decrease in the size of the hilar, mediastinal, and retroperitoneal lymphadenopathy.

Key Words: Bilateral testicular masses, sarcoidosis, steroids

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INTRODUCTION

Sarcoidosis is a systemic and idiopathic disease condition, most likely related to impaired regulation of immunity.^[1] In 80-90% of cases, the findings are localized to the thoracic area. A bilateral hilar lymphadenopathy on chest radiographs is usually incidentally detected. Sarcoidosis can involve any organ, but testicular involvement is very unusual. Kodama *et al.* reviewed his cases of the male genitourinary sarcoidosis and found that the epididymis was the most frequently involved organ, followed by the testis.^[1]

CASE REPORT

A 40-year-old African American male presented to outpatient clinic with the complaint of bilateral scrotal swelling for last 8 months. One week before his presentation, he started having dull, constant, bilateral scrotal pain that made him come to our office. He denied any trauma, penile discharge, fever, cough, weight loss, and shortness of breath, abdominal pain, bowel, and bladder, visual or sexual disturbances. Past medical history included hypertension, dyslipidemia, and nonadherence to his prescribed medication. The patient never smoked. He denied drinking alcohol or any illicit drug use. Vital signs revealed a blood pressure of 160/104 mm/Hg, heart rate 94/min, temperature 98.5, respiratory rate 16/min, body mass index 35.39. On scrotal examination, there were nontender, multiple small nodules palpated on both testis. No hydrocele was seen. No lymph node enlargement was appreciated, and the rest of the physical exam was unremarkable. Laboratory studies showed hemoglobin of 16.7 g/dl, white blood cell count 5000/ μ l, platelet count 247,000/ μ l,

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sodium 136 mEq/L, potassium 4.1 mEq/L, bicarbonate 24 mEq/L, blood urea nitrogen 16 mg/dl, creatinine 1.24 mg/dl, calcium 10.2 mg/dl, lactate dehydrogenase 201 U/L, thyroid-stimulating hormone 2.120 uIU/ml, alpha fetoprotein 8.5 ng/ml, beta human chorionic gonadotropin quantitative <1 MIU/ml, testosterone total 368 ng/dl, angiotensin converting enzyme 22 U/L, QuantiFERON-TB Gold® (Qiagen sample and assay technologies) was negative. Ultrasound of scrotum demonstrated multiple hypoechoic masses bilaterally ranging between 3 mm and 1.5 cm involving both testicles. There was no hydrocele or varicocele. Computed tomography (CT) of the abdomen and pelvis with contrast revealed several prominent retroperitoneal lymph nodes. Patient was referred to urologist for operative intervention to identify the etiology of the bilateral testicular masses. A partial orchiectomy was planned. Multiple testicular masses of varying sizes involving both testicles were identified during surgery, and two additional areas of testicular mass were enucleated and sent for final pathology specimen. Frozen section revealed a noncaseating granuloma without any evidence of malignancy so the presumptive diagnosis of sarcoidosis was made and the testis was delivered back into the scrotum [Figure 1]. Final pathology report confirm the diagnosis of sarcoidosis and negative for neoplastic process, special stain for acid-fast bacterial and fungal organisms. To look for other organ involvement of sarcoidosis, chest X-ray was done that showed bilateral hilar fullness, right greater than left and for better result CT chest was done which confirmed reticulonodular pattern throughout both lung fields with enlarged mediastinal and right paratracheal

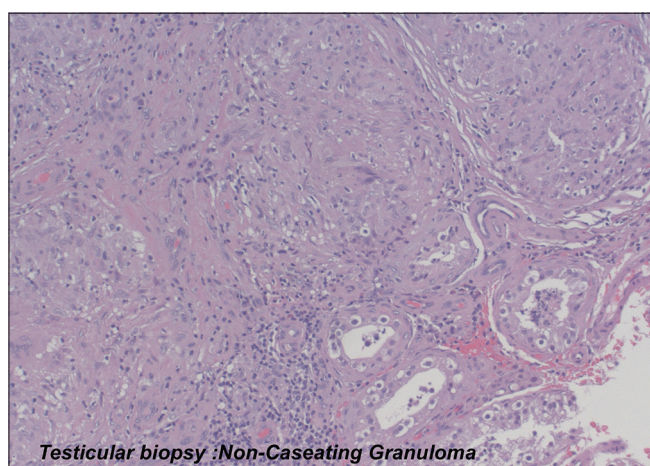


Figure 1: Histopathology of testicular biopsy surgical specimens revealed nonnecrotizing granulomas composed mainly of epithelioid cells surrounded by lymphocytes, high magnification (H and E, original magnification ×400)

nodes with several shotty left hilar nodes. Treatment with high-dose corticosteroids resulted in complete resolution of the testicular mass and a significant decrease in the size of the hilar, mediastinal, and retroperitoneal lymphadenopathy.

DISCUSSION

Testicular sarcoidosis, although rare, should also be considered in the differential of testicular masses.^[2] Over 80% of patients with genitourinary sarcoidosis present with intrathoracic manifestations.^[3] Most patients are 20–40 years of age and the majority of patients present with scrotal discomfort or pain. There are also some reports of testicular tumors coexisting with sarcoidosis.^[4]

Orchiectomy (inguinal approach) is usually indicated in patients presenting with a unilateral scrotal mass, even in cases of known systemic sarcoidosis.^[5] On the other hand, some believe that orchiectomy should be reserved for patients in whom no alternatives are available or in whom a malignancy is suspected.^[6] Histopathology remains the best way to confirm the diagnosis of sarcoidosis.

Corticosteroids are indicated in testicular sarcoidosis as they can reduce the intensity of testicular pain and improve associated azoospermia.^[4-6]

For male patients presenting with a testicular mass, physicians must remember to include sarcoidosis in the differential diagnosis.

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