Sarcoid of the testis

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Sarcoidosis is a chronic disease that rarely manifests in the male reproductive tract. Due to its infrequent nature, treatment for sarcoid of the male reproductive tract is controversial. We report a case of incidentally discovered sarcoid of the testis in a white male managed with a testis sparing approach.

Key Words: sarcoidosis, male reproductive tract, testis

Introduction

Sarcoidosis is a chronic disease of unknown etiology.[1] It is rarely diagnosed in white males and seldom occurs in the male reproductive tract.[2] We report a case of incidentally discovered sarcoid of the testis in a white male managed by an organ preservation approach.

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Case report

A 32 year-old white male presented to his family physician with a palpable mass within his left spermatic cord. He had previously undergone a bilateral vasectomy as a form of family planning. The family physician ordered a scrotal ultrasound and referred the patient to urology. The patient was otherwise asymptomatic. On examination, a lesion was palpable within his left spermatic cord consistent with a sperm granuloma secondary to his previous vasectomy. The left testis itself was unremarkable. There were no palpable lesions. Incidentally, the scrotal ultrasound revealed a hypoechoic 4 mm well-circumscribed lesion within the upper pole of the left

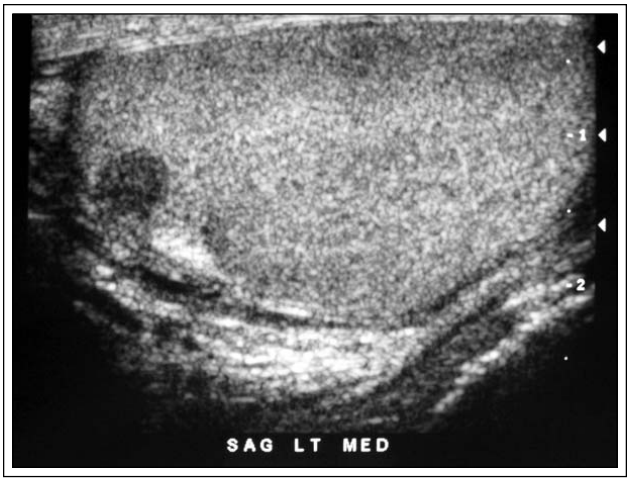

Figure 1. Scrotal ultrasound demonstrating a hypoechoic 4 mm well-circumscribed lesion within the upper pole of the left testis.

testis, Figure 1. Alpha fetoprotein (AFP), beta human chorionic gonadotropin (b-HCG) and lactate dehydrogenase (LDH) were all within normal limits.

The patient's past medical history was significant for sarcoidosis. This was diagnosed after a routine chest x-ray was found to be suspicious for sarcoidosis which led to a lymph node biopsy via mediastinoscopy. The patient was asymptomatic with respect to his sarcoidosis and thus, was not offered any treatment.

The patient was explored through a left inguinal incision to rule out a testicular neoplasm. The vascular supply was occluded and the testis was delivered into the wound. At this point, the lesion was palpable. The testis was opened and the lesion was exposed, Figure 2.

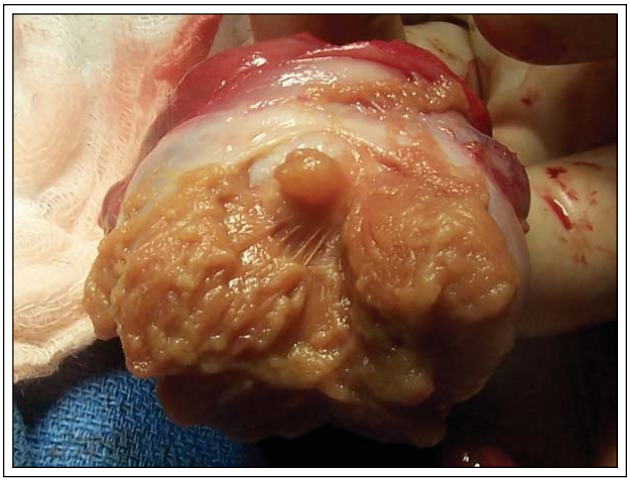

Figure 2. Gross specimen demonstrating 4 mm nodule within opened testis.

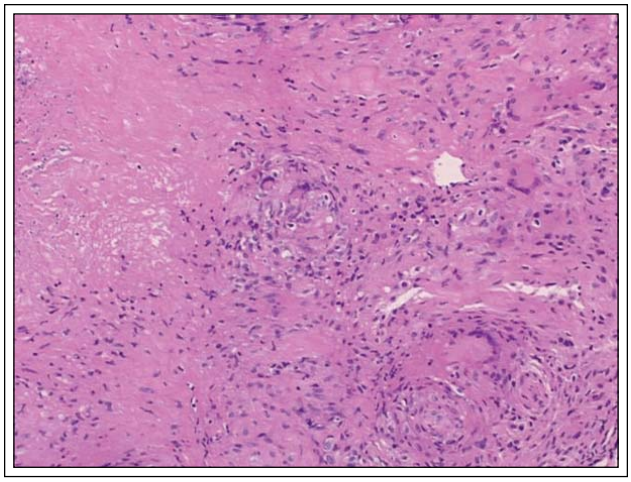

Figure 3. Hematoxylin-eosin stain at 100x magnification demonstrating epithelioid histiocytes and multinucleated giant cells.

The lesion was removed and sent for frozen pathology. Frozen sections revealed a non-caseating granuloma consistent with sarcoidosis. Final pathology confirmed this finding with giant cells and epithelial granulomas concentrated around and within the seminferous tubules, Figure 3. No intratubular germ cell neoplasia or invasive germ cell neoplasia were identified. Therefore, we elected to preserve the testis. The tunica albuginea was closed, the testicle was returned to the left hemiscrotum, and the wound was closed.

Discussion

Sarcoidosis is a chronic systemic disease of unknown etiology.[1] It is characterized by the presence of non-caseating epithelioid cell granulomas.[3] The prevalence of sarcoidosis is approximately one to six cases per 1000 people worldwide[4] but it is estimated to affect one in 10,000 people in the United States.[5] It is 20 times more common in black patients than white patients and 10 times more common in females.[1] The average age of onset of sarcoidosis is 33 years old.[6]

Sarcoidosis most commonly affects the lungs but other organ systems may also be involved including the reticuloendothelial (40%), ocular (25%), nervous (7%), parotid (6%), osseous (3%), myocardial and endocrine systems.[7] The genitourinary system is affected in 0.2% of clinically detected cases and 5% within autopsy series.[6] Manifestations of sarcoidosis of the male reproductive tract include lesions within the epididymis, testis, spermatic cord, tunica albuginea, and prostate.[6] Testicular lesions are diagnosed clinically in fewer than 0.2% of all

sarcoidosis cases.[8] There are even fewer reports of testicular involvement without concurrent epididymal involvement.[9] The first case of testicular sarcoidosis was reported by Nickerson in 1937.[10] The patient had microscopic disease detected at autopsy.[10] The first clinically detected case of testicular sarcoidosis was reported in 1941 by Seaworth.[10] Including the current case, only 30 patients with sarcoidosis involving the testis have been reported in the literature.[6,11] To the best of our knowledge, this case represents only the third reported case of testicular sarcoidosis in a white male.[1]

The differential diagnosis of testicular and epididymal sarcoidosis includes other causes of granulomatous diseases such as tuberculosis, syphilis, sperm granuloma, filariasis, lymphogranuloma venereum, granuloma inguinale, atypical tuberculosis, blastomycosis, coccidioidomycosis, actinomycosis, schistosomiasis, and Wegener's granulomatosis.[5] However, the most important entity that must be ruled out with a suspected testicular sarcoidosis is malignancy. The importance of pathologic diagnosis of a testicular lesion in a patient with systemic sarcoidosis is highlighted by Gellar et al who reported a case of mediastinal sarcoidosis with concurrent teratoembryonal carcinoma of the testis.[12] In addition, the concomitant diagnosis of a germ cell testis tumor and sarcoidosis have been reported by numerous other authors.[13]

Therapy for sarcoidosis of the male reproductive tract is controversial.[13] Most patients will have systemic disease requiring steroid therapy. However, for asymptomatic patients, it is unclear if corticosteroids are necessary or even beneficial.[14] Resolution of epididymal granulomas after steroid treatment has been documented[15] while others have found that epididymal involvement can develop or progress while on steroids.[14] Although genitourinary sarcoidosis may be clinically suspected in a patient with known sarcoidosis, inguinal exploration should be performed in any patient with a testicular mass.[14] In a patient with known systemic sarcoidosis, it has been suggested that a conservative approach may be performed.[16] If frozen section histopathology reveals a lesion consistent with sarcoidosis, then the testis may be spared. If there is any uncertainty that the lesion may not be benign, a radical orchiectomy should be performed. □

References

1. Naseem S, Lindley R, Mufti GR. Testicular sarcoid. *Urol Int* 2001;67:100-101.
2. Haas GP, Badalament R, Wonnell DM, Miles BJ. Testicular sarcoidosis: case report and review of the literature. *J Urol* 1986;135:1254-1256.
3. Strawbridge LR, Blute ML, James EM, Gillespie DJ. Intraoperative ultrasonographically guided biopsy in testicular sarcoidosis: a case report. *J Urol* 1990;143:1229-1231.
4. Gross AJ, Heinzer H, Loy V, Dieckmas KP. Unusual differential diagnosis of testis tumor: intrascrotal sarcoidosis. *J Urol* 1992;147:1112-1114.
5. Svetec DA, Waguespack RL, Sabanegh ES. Intermittent azoospermia associated with epididymal sarcoidosis. *Fertil Steri* 1998;70:777-779.
6. Kodama K, Hasegawa T, Egawa M, Tomosugi N, Mukai A, Namiki M. Bilateral epididymal sarcoidosis presenting without radiographic evidence of intrathoracic lesion: review of sarcoidosis involving the male reproductive tract. *Int J Uro* 2004;11:345-348.
7. Turk CO, Schacht M, Ross L. Diagnosis and management of testicular sarcoidosis. *J Uro* 1986;135:380-381.
8. Handa T, Nagai S, Hamada K, Ito I, Hoshino Y, Shigeamatsu M, Izumi T, Mishima M. *Intern Med* 2003;42:92-97.
9. Revington PJ. Testicular sarcoidosis. *Br J Urol* 1994;73:596-597.
10. Seaworth JF, Davis SJ, Donovan WN. Aggressive diagnostic approach indicated in testicular sarcoidosis. *Urology* 1983;21:396-398.
11. Massarweh NN, Bhalani VK, Shaw KK, Crawford B, Lang E, Davis R. Testicular presentation of sarcoidosis and organ preservation: case report and review of management strategies. *Urology* 2006;67:200.
12. Gellar RA, Kuremsky DA, Copeland JS, Stept R. Sarcoidosis and testicular neoplasm: an unusual association. *J Urol* 1977;118:487-488.
13. Tjan-Heijnen VCG, Vlasveld LT, Pernet FPPM, Pauwels P, De Mulder PHM. Coincidence of seminoma and sarcoidosis: a myth of fact? *Ann Oncol* 1998;9:321-325.
14. Ryan DM, Lesser BA, Crumley LA, Cartwright HA, Peron S, Haas GP, Bower G. Epididymal sarcoidosis. *J Urol* 1993;149:134-136.
15. Astudillo L, Payoux P, Game X, Sailler L, Arné, J-L, Arlet-Suau E. Bilateral testicular and epididymal involvement in sarcoidosis. *Am J Med* 2004;116:646-647.
16. Hasan N, Baithun SI, Badenoch D. Sarcoidosis of the testis. *Histopathology* 1993;22:406-407.