ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 7, Issue, 08, pp.19619-19621, August, 2015

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE STUDY

A RARE CASE OF TUBERCULOUS EPIDYDIMO-ORCHITIS MIMICKING HYDROCELE: A DIAGNOSTIC DILEMMA

***Kunjan Udani, Chirag Vaja, Radha Verma, Kiran Gaikwad and Mugdha Kowli**

Department of General Surgery, K. J. Somaiya Hospital and Research Centre, Mumbai, Maharashtra, India

ARTICLE INFO

Article History:
Received 08th May, 2015
Received in revised form
16th June, 2015
Accepted 02nd July, 2015
Published online 31st August, 2015

Key words:
Epididymo-orchitis,
Scrotal swelling,
Extra pulmonary tuberculosis

ABSTRACT

A rare occurrence, isolated tubercular epididymo-orchitis poses a diagnostic and therapeutic challenge. A 45-year old male presented with a right scrotal swelling since 5 months which, based on physical examination and ultrasonographic findings, was suggestive of a right hydrocele. Operative findings during the transvaginal hydrocele repair revealed dense adhesions with granulomatous necrosis and therefore, prompted us to perform a right-sided orchidectomy. Histopathological study thereafter revealed features of tuberculous epididymo-orchitis. Hence, it is imperative to consider a differential diagnosis of tuberculous epididymo-orchitis in a case of scrotal swelling in a country like India where tuberculosis is known to be endemic.

Citation: Kunjan Udani, Chirag Vaja, Radha Verma, Kiran Gaikwad and Mugdha Kowli, 2015. "A rare case of tuberculous epididymo-orchitis mimicking hydrocele: A diagnostic dilemma", *International Journal of Current Research*, 7, (8), 19619-19621.

INTRODUCTION

Genitourinary tuberculosis is one of the most common sites of extrapulmonary tuberculosis, second only to lymph node involvement (Wise and Marella, 2003). Usually secondary to pulmonary tuberculosis or spread from various other sites of genital or urinary tract tubercular infection, isolated primary infection of epididymis and testis is rare (Wise and Shteynshlyuger, 2008). Epididymal involvement occurs either hematogenously or by a retrograde pathway from an infected prostate (Sharma *et al*., 2015). We present a case of isolated right sided tubercular epididymo-orchitis mimicking a right sided hydrocele.

CASE REPORT

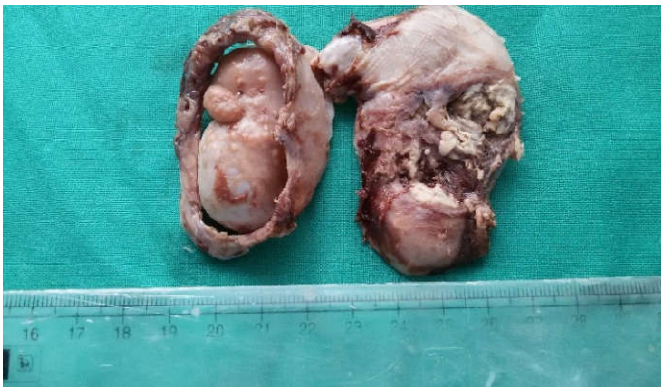
A 45-year old male presented to the OPD with a complaint of right scrotal swelling since 5 months. The swelling was painless, insidious in onset and gradually increasing in size. He did not give any relevant past or family history or history of major comorbid conditions. Physical examination revealed an enlarged right scrotum measuring approximately 5 x 4 x 3 cm.

****Corresponding author: Kunjan Udani***
Department of General Surgery, K. J. Somaiya Hospital and Research Centre, Mumbai, Maharashtra, India

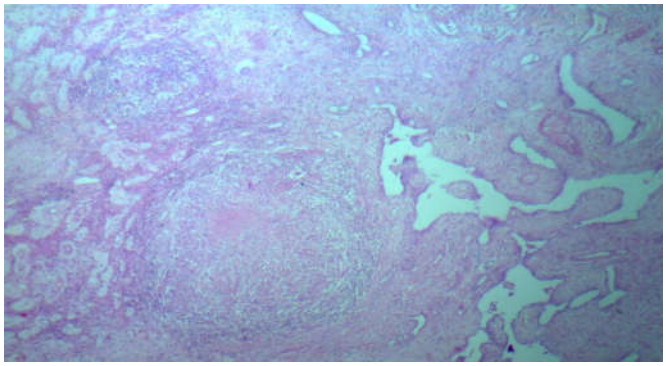
Transillumination and fluctuation tests were positive, giving an impression of a right hydrocele. The patient's serology reports were reactive for HIV I and II antibodies but were otherwise unremarkable. Chest X-ray was normal. Ultrasonographic examination of the scrotum revealed an enlarged right testis with a right hydrocele.

A right-sided transvaginal hydrocele repair was planned. During the surgery, several dense granulomatous necrotic lesions were noted. The enlarged right testis was tightly adhered to the overlying skin and a tuberculoma over the right testis was also noted. Based on these findings, a right-sided orchidectomy was the preferred treatment and the appropriate consent was obtained. The right orchidectomy specimen (a) was sent for histopathological study. The specimen measured 5 x 4 x 3 cm and revealed a thickened tunica.

The cut section showed a grey-white surface. Microscopic features included thickened tunica vaginalis lined by dense suppurative inflammation and multiple epithelioid cell granulomas, Langhan's giant cells and caseous necrosis within rete testis, epididymis and testicular parenchyma as well as atrophic tubules in adjacent testis. Hence, the impression was that one of tuberculous epididymo-orchitis (b).



a) Specimen of right testis



b) Granulomatous inflammation

DISCUSSION

A significant pandemic disease, tuberculosis is being compounded by the increased prevalence of HIV. Genitourinary tuberculosis, namely scrotal tuberculosis, mainly affects males between the ages of 20-70 years (Ferrie and Roundle, 1993 and Heaton *et al*., 1989). Usual clinical presentations include painful or painless enlargement of the testis (Mottarak and Peh, 2006). Genitourinary tuberculosis occurs by 2 routes of spread: hematogenously from a primary focus elsewhere such as the lung or retrograde extension from prostate and seminal vesicles. Isolated involvement of only the testis by hematogenous spread, without epididymal involvement, is exceptional. The earliest lesions noted are yellowish necrotic areas around the epididymal tail (Mottarak and Peh, 2006). Our patient was HIV positive and presented with a painless scrotal swelling since 5 months.

Based on the clinical examination supplemented with ultrasonographic imaging, we arrived at a diagnosis of right sided hydrocele, which we planned to repair. Tuberculous orchitis, on ultrasonography, presents as several different patterns: diffusely enlarged heterogeneously hypoechoic testis, diffusely enlarged homogeneously hypoechoic testis and presence of multiples small hypoechoic nodules in an enlarged testis (Kumar *et al*., 2005; Muttark *et al*., 2001; Kim *et al*., 1993 and Briceno-Garcia *et al*., 2007. In our patient, we were unable to visualize the tubercular epididymo-orchitis due to fluid collection in the tunica vaginalis. Hence, the pre-operative diagnosis was one of a right sided hydrocele. Ultrasonographic imaging can be supplemented with MRI and fine needle aspiration cytology when the results are inconclusive. MRI may prove to be efficient due to its multiplanar capabilities and intrinsic high contrast (Gramer *et al*., 1991). Though the patient did not have any constitutional symptoms of tuberculosis or a previous history of tuberculous infection, the presence of dense adhesions with granulomatous necrosis warranted a right sided orchidectomy. Histopathological examination subsequently confirmed tuberculous epididymo-orchitis. As tuberculosis has varied presentations, it is often difficult to reach a conclusive diagnosis. This is especially true when a primary focus, usually seen in the lung or kidney, is absent or patient does not give any history of constitutional symptoms of tuberculosis. Due to this, despite serological, culture and histopathological tests, the diagnosis is often delayed. Therefore, it is vital that a differential diagnosis of a scrotal swelling include tuberculous epididymo-orchitis besides hydrocele, tumors, torsions and other infective etiologies (Ojo *et al*., 2014).

Conclusion

Because of its wide and nonspecific features, tuberculous epididymo-orchitis poses a clinical and radiological challenge for diagnosis. Though rare, isolated tubercular epididymo-orchitis may be the only presentation of genitourinary tuberculosis. In countries like India, where tuberculosis is widespread, it must be considered as a differential diagnosis for a patient presenting with a scrotal swelling. Treatable with anti-tubercular treatment, early and prompt diagnosis of tubercular epididymo-orchitis could prevent unnecessary radical treatment like orchidectomy and subsequent effect on fertility.

REFERENCES

Briceno-Garcia, E.M., Gomez-Pardal, A., Alvarez-Bustos, G., Artero-Munoz, I., Molinero, M.M., Seara-Valero, R., *et al*. 2007. Tuberculous orchiepididymitis after BCG therapy for bladder cancer. *J Utltrasound Med*., 26:977-9.

Ferrie, B.G., Roundle, J.S. 1993. Tuberculosis epididymo-orchitis. A review of 20 cases. *Br J Urol*., 5:437-9.

Gramer, B.M., Chegel, E.A., Thueroff, J.W. 1991. MR imagin in the differential diagnosis of scrotal and testicular disease. *Radiograhics*., 11:9-21.

Heaton, N.D., Hogan, B., Michell, M., Thomson, P., Yates-Bell, A.J. 1989. Tuberculosis epididymo-orchitis: clinical and ultrasound observations. *Br J Urol*., 64:305-9.

Kim, S.H., Pllack, H.M., Cho, K.S., Pollack, M.S., Han, M.C. 1993. Tuberculosis epididymitis and epididymo-orchitis, songraphic finding. *J Urol*., 150:81-4.

Kumar, V., Abbas, A.K., Fausto, N. 2005. The lower urinary tract and male genital tract: pathologic Basic of Disease. 7th ed. Saunders: *Elsevier*., P. 1039.

Mottarak, M.M., Peh, W.C.G. 2006. Case 91: tuberculosis epididymo-orchitis. *Radiology*, 238:748-51.

Muttark, M., Peh, W.C., Lojanapiwat, B., Chaiwun, B. 2001. Tuberculosis epididymitis and epididymo-orchitis: sonographic appearances. *AJR Am J Roentgenol*., 176:1459-66

Ojo, B.A., E.I. Ogwuche, B.M. Duduyemi, C. Okani, E.O. Umobong, G.T.A. Jombo, 2014. Testicular tuberculosis in an HIV positive patient mimicking malignancy: a case report. *African J Urology*, 20:28-30.

Sharma, D. *et al*. *Med Res Chron*., 2015; 2(2):222-225.

Tessler, F.N., Tublin, M.E., Rifkin, M.D. 1998. US case of the day. Tuberculosis epididymoorchitis. *Radiographics*, 18:251-3.

Wise, G.J., Marella, V.K. 2003. Genitourinary manifestation of tuberculosis. *Urol Clin North Am*., 2003; 30:111-21.

Wise, G.J., Shteynshlyuger, A. 2008. An update on lower urinary tract tuberculosis. *Curr Urol Rep*., 2008; 9(4):305-313.

****