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Case Note

Isolated tuberculosis of testis

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Abstract
Isolated epididymo-orchitis is an uncommon presentation of tuberculosis. We report a case of left sided epididymo-orchitis and scrotal involvement due to tuberculosis in a young male patient. The diagnosis was suspected on clinical examination of scrotum and confirmed by FNAC of scrotal and testis. Patient improved after taking antitubercular treatment.

Key words: infection, scrotum, treatment

Genitourinary tuberculosis is one of the most common manifestations of extrapulmonary tuberculosis and represents 2-4% of cases of tuberculosis or approximately 15% of non-pulmonary manifestations of tuberculosis, although genitourinary involvement has been noted in 7 % of the patients with tuberculosis at autopsy[1]. The prostate, epididymis and seminal vesicles are the most commonly affected sites while involvement of the testis is very rare. The isolated epididymo-orchitis is an unusual presentation of tuberculosis and may produce diagnostic difficulty while excluding a possible testicular neoplasm[2]. We present a case of isolated epididymo-orchitis with scrotal involvement due to tuberculosis with no evidence of tuberculous foci elsewhere in the body.

Case report
A 18 year male, nonsmoker, farmer presented with complaints of pain and ulcer in scrotum. He had small nodular swelling on the left scrotal wall six weeks earlier, which subsequently enlarged and ruptured. These were followed by increase in pain and diffuse swelling of the left scrotum. There were no other constitutional or systemic symptoms. He denied dysuria, frequency, urgency of micturition and history of any sexually transmitted or urological disease. His past medical history was also negative. On examination an ulcerative wound over left scrotum 4x4 cms in size fixed to testis, with undermined edges was found. There was diffuse swelling of the left sided scrotum with left thickened cord. The right testis was normal on examination (fig-1). The systemic examination was essentially normal. Investigations revealed haemoglobin 10.0 gm%, total leucocytes count 5,900/mm^3, differential count – polymorphs 58%, lymphocytes 40%, eosinophils 1%, basophils 1%, ESR 15 mm after one hour, fasting blood sugar 94 mg% and normal urine examination on routine and microscopic evaluation. VDRL and HIV were seronegative. FNAC suggested tuberculous orchitis with tuberculous granulomatous lesion. To find out tuberculous lesions elsewhere in the body, patient was investigated by skiagram chest, sputum examination for AFB, ultrasonography of abdomen, intravenous urography, urine smear and culture for *Mycobacterium tuberculosis* etc. but none of these tests revealed positive results.

Anti-tuberculous treatment with Isoniazid 300mg, Rifampicin 450mg, Ethambutol 1000mg and Pyrazinamide 1500mg was started as directly observed therapy (Category I). The swelling disappeared within four weeks and ulcer healed subsequently.

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Fig. 1: pre-treatment clinical photograph

Fig. 2: post-treatment (after 1month) clinical photograph

Discussion

Genital tuberculosis is usually a disease of sexually active males and most commonly occurs between the ages of 20 and 40 years, although it has been reported in children also. Extra-genital involvement including pulmonary and renal tuberculosis can be documented in 50 % and 80 to 85 % respectively of the patients with genital tuberculosis. The spread of tuberculosis to the epididymis is thought to occur haematogenously or by retrocanalicular descent of organisms from the haematogenously infected prostate. Distal spread through the genitourinary tract from a renal source also may occur. A rare possibility of female to male transmission (veneral transmission of tuberculosis) has also been suggested. Testicular involvement is usually as a result of local invasion from the epididymis, retrograde seeding from the epididymis and rarely by haematogenous spread[2]. The involvement of scrotal wall in our case suggests local extratesticular extension of disease process. Genital tuberculosis commonly presents as unilateral scrotal swelling, pain, discharging sinuses. The presence of abscess or sinus formation indicates advanced widespread scrotal disease. The most characteristic feature is its edge which is thin, reddish blue and undermined. There is pale granulation tissue with scanty serosanguineous discharge in the floor and slight induration at the base which indicates that this ulcer is a chronic one. The urinary symptoms and sterile pyuria strongly suggest associated renal involvement which was not evident in our case. High resolution sonography is currently the best technique for imaging the scrotum and its contents[4]. Tuberculous epididymo-orchitis has considerable effect on the fertility. The sperm counts and motility may be reduced due to blockage of the vas and/or secondary atrophy[3]. Our case demonstrates unusual presentation of genital tuberculosis with no evidence of associated pulmonary or renal tuberculosis, bilateral involvement of epididymis, diffuse involvement of left testis with ulceration of the scrotum. Tuberculous epididymo-orchitis must be considered in the differential diagnosis of a scrotal swelling apart from testicular tumour, acute infection and inflammatory orchitis[5]. All attempts must be made for early diagnosis and treatment of this condition to avoid unnecessary epididymectomy and effect on fertility.

References

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