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Pathology

Tuberculosis of the Penis – A Rare Case

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Case Report

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Abstract: Tuberculosis of penis is extremely rare, comprising <1% cases of genital tuberculosis in male patients. It can be primary or secondary. Tuberculosis of penis presents as superficial ulcer or small nodule on the glans or around the corona with or without inguinal lymphadenopathy. It is often difficult to diagnose the condition because it mimics numerous other diseases like penile carcinoma, syphilitic ulcer, HIV infection and granuloma inguinale. Histopathological examination plays important role in diagnosis of penile tuberculosis. We present a rare case of tuberculosis of penis in a 71 year old male patient who presented as a penile non-healing ulcer. Though penile tuberculosis is rare it should be considered as a differential diagnosis in cases of non-healing ulcer over penis.
Keywords: Penile tuberculosis, glans penis, non-healing ulcer.

INTRODUCTION

Genitourinary tuberculosis in male patients is an unusual presentation, the incidence being <0.5% of extrapulmonary tuberculosis [1]. Lymph nodes being the commonest site of extrapulmonary tuberculosis [2]. Isolated genitourinary tuberculosis is again rarely seen, comprising 28% patients of genitourinary tuberculosis [3]. Epididymis is the commonest site of isolated genital tuberculosis. Other sites of affection being seminal vesicles, prostate, testis and vas deferens in descending order [4]. Tuberculosis of penis is a very rare occurrence [5]. We present a rare case of penile tuberculosis in a 71 year old male patient who presented as non-healing ulcer on glans penis.

CASE HISTORY

A 71 year old male patient presented with complaints of non-healing wound over glans penis since 6 months (fig: 1). He was a non-diabetic patient. His Erythrocyte Sedimentation Rate (ESR) was 80 mm at the end of 1 hour, the complete blood count revealed mild lymphocytosis, urinalysis was within normal limits and culture was negative. His chest X-ray and USG abdomen were within normal limits. There was no previous history of tuberculosis. His HIV status and VDRL were nonreactive. The case was clinically suspected as carcinoma penis.

HISTOPATHOLOGICAL FINDINGS

Excised specimen of prepuce was received for histopathological examination in the form of irregular, flat, grey white tissue piece covered with skin totally measuring 4.5 x 2.7 x 1.5 cm. The prepucial skin revealed an ulcerated area with undermined edges measuring 3 x 0.7 x 0.3 cm (fig: 1).

Microscopy revealed ulcerated epidermis. Subepithelial tissue showed areas of necrosis and numerous granulomas composed of epithelioid cells, Langhans giant cells and lymphocytes (fig: 2, 3 ,4). 20% Ziehl-Neelsen stain did not reveal acid fast bacilli.

Considering these features diagnosis was given as necrotizing granulomatous inflammation suggestive of tuberculous etiology.

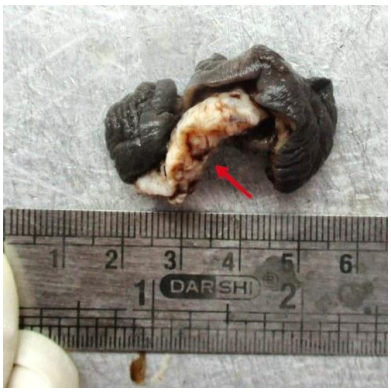

Fig-1: Ulcer over glans penis

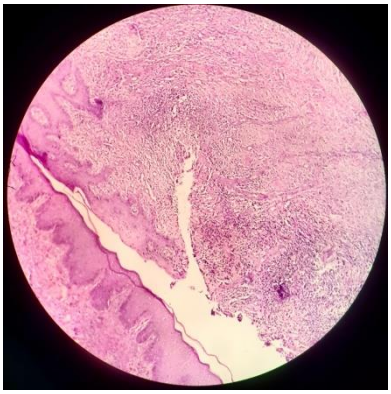

Fig-2: Ulcerated epidermis

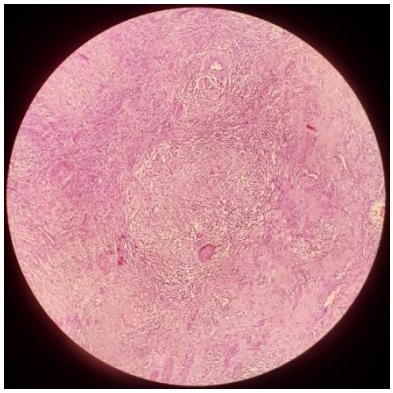

Fig-3: Subepithelial tissue showing areas of necrosis and granulomas

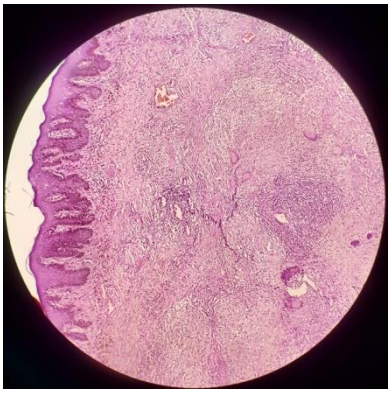

Fig-4: Epidermis with numerous giant cells and granulomas

DISCUSSION

Tuberculosis of penis is a rare entity and it can be primary or secondary. The 1st case of penile tuberculosis was diagnosed in 1848 by Fournier [6].

Our case was considered as primary penile tuberculosis as the chest X-ray, USG abdomen showed no abnormal findings; urine microscopy and culture were sterile ruling out focus of tuberculosis elsewhere in the body. Possible modes of infection in case of penile tuberculosis are sexual transmission from female partner with genital tuberculosis or direct inoculation through contaminated hands or clothes. There was no history of circumcision or history of local trauma in our case.

Penile tuberculosis presents as painless or painful small nodule or ulcer which gradually enlarges over a period of time along with induration or swelling of penis. Erectile dysfunction may or may not be present. Inguinal lymph node may be palpable. Our case presented as a gradually enlarging non-healing ulcer over a period of 6 months with no inguinal lymphadenopathy giving a strong clinical suspicion of carcinoma penis.

The differential diagnosis of penile tuberculosis can be penile carcinoma, syphilitic ulcer, genital herpes simplex, granuloma inguinale and HIV infection [7].

A confirmatory diagnosis of penile tuberculosis is made with histopathological examination. Granulomatous inflammatory reaction in biopsy specimen gives evidence of tuberculosis. 20% Ziehl-Neelsen stain in biopsy specimen may or may not reveal acid fast bacilli. Hence, presence of granulomas in the biopsy specimen is considered as strong evidence of tuberculosis irrespective of presence or absence of acid fast bacilli in 20% Ziehl-Neelsen stain. Increased ESR, lymphocytosis on peripheral smear, positive urine culture for acid fast bacilli, ELISA, PCR tests may help for making the diagnosis. Our case also revealed raised ESR and lymphocytosis strongly supporting the diagnosis of tuberculosis.

Penile tuberculosis responds to 6 months of anti-Koch's treatment. Histopathological examination of biopsy from the ulcer plays an important role in diagnosis of penile tuberculosis. In our case the patient is responding well to anti Koch's treatment.

CONCLUSION

Tuberculosis of penis mimics spectrum of clinical conditions from infections to carcinoma. Though it is rare, it should be considered as one of the clinical diagnosis as, tuberculosis is very prevalent in developing countries like India and complete remission is possible with anti-Koch's treatment.

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