Primary Perianal Tuberculosis in a Diabetic Patient

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ABSTRACT

Primary perianal tuberculosis is a rare form of extra pulmonary tuberculosis. We present a case of perianal tuberculosis without any pulmonary or gastrointestinal involvement in a diabetic patient. Histopathological examination of perianal lesion demonstrated loose granulomas and positive staining for Erlich-Ziehl-Neelsen (EZN) stain.

Keywords: Diabetes, extra pulmonary tuberculosis, EZN staining, perianal tuberculosis

INTRODUCTION

Tuberculosis may be pulmonary alone, extrapulmonary alone or both. Extrapulmonary tuberculosis can manifest in any organ or organ system. It accounts for 5% of all cases of tuberculosis.[1] Ano-perianal tuberculosis is a rare form of extrapulmonary tuberculosis and presents with varied presentation, frequently mimicking other common as well as rare diseases.[2] It is thus, imperative to recognize this entity, as it requires a specific treatment. Ano-perianal tuberculosis may be associated with abdominal tuberculosis either as extension of original lesion or due to spread via lymphatics.[3]

Case Report

CASE REPORT

A 52-year-old man presented with acute perianal abscess with ulcerated and indurated edges. The lesion developed as an insidious onset of 1 month duration. The patient is a known case of diabetes for last 5 years and he is on anti-diabetic treatment. There was no past history or family history suggestive of tuberculosis. Local examination of anus showed a 2 cm × 1 cm swelling with posterior ulceration and irregular margin. Per rectal examination and colonoscopy revealed no abnormality. Laboratory findings including, routine hematological parameters, biochemical parameters (renal function test and liver function test), and urine biochemical findings were normal. Erythrocyte sedimentation rate (ESR) was mildly raised to 25 mm/h. Radiological tests like chest X-ray, abdominal contrast computed tomography were normal. Sputum smear examination on three consecutive days was negative for acid fast bacilli. Histopathological examination of biopsy from the edge of lesion revealed organizing inflammatory granulation tissue, areas of caseating necrosis and scattered

epithelioid histiocytes. EZN staining was positive for acid fast bacilli [Figure 1]. Polymerase chain reaction (PCR) of biopsy material was positive for mycobacterium tuberculosis. The patient was put on anti-tubercular treatment for 6 months and the lesion healed completely without any recurrence in 1 year of follow-up.

DISCUSSION

Tubercular involvement of anus is one of the common causes of granulomatous diseases within anorectal region.[1] Crohn's disease is one of the most common differential diagnosis of perianal tuberculosis.[4] Perianal tuberculosis presents as myriad of clinical presentations such as acute perianal abscess, chronic anal ulcer, fistula etc., Histopathological evidence of tubercular granuloma in surgical biopsy specimen is one of the main corner stone of diagnosis of perianal tuberculosis due to vague radiological and endoscopic presentations. There is wide range of investigative tools for establishing diagnosis of tuberculosis. Laboratory investigations such as total leucocyte count, ESR, Montoux test, detection of acid fast bacilli (AFB) in tissue sections or discharge, serological diagnosis,[5] and mycobacterial culture[6] are important tests for diagnosis. Newer diagnostic methods such as PCR and gold interferon tests are more precise and accurate methods. Various studies of prevalence of tuberculosis in diabetics, such as conducted by Webbetace[7] demonstrating tuberculosis infection prevalence to be 29.8% among diabetics and García *et al*.[8] to be 45.9% among diabetics. The increased susceptibility to tuberculosis in the diabetes is multifactorial and includes decreased neutrophil function (chemotaxis, adherence to endothelium, phagocytosis and microbicidal activity) and impaired cytokine production by macrophages. It has been found that up to 5% of diabetics die due to tuberculosis infection, infections of skin, pneumonia, and pyelonephritis.[9]

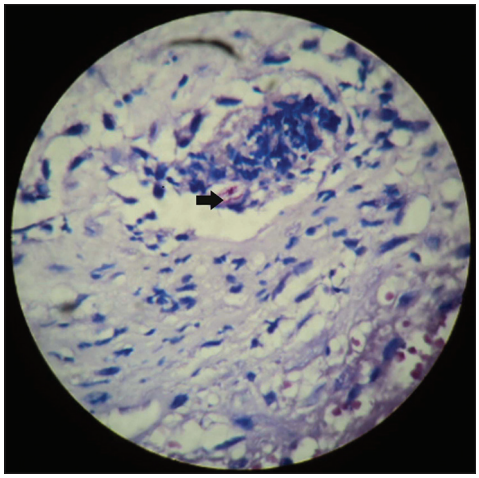

Figure 1: Section of perianal lesion demonstrating solid staining long acid fast bacilli-(black arrow)-Erlich-Ziehl-Neelsen staining, (X1000)

CONCLUSIONS

It can be concluded that for any kind of non-healing perianal lesion with typical or atypical presentation especially in the diabetics, the differential diagnosis of perianal tuberculosis must be thought and investigated accordingly.

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