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Case Report

A Pyoderma Gangrenosum like Presentation of Cutaneous Tuberculosis (Lupus Vulgaris)

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ABSTRACT

Context: Tuberculosis of the skin is relatively rare condition with a varied spectrum of presentations which depends upon immune status and the mode of acquiring infection. The cutaneous tuberculosis is seen in developing countries where incidence and prevalence of tuberculosis is high. The diagnosis of cutaneous tuberculosis is based on the clinical features, tuberculin sensitivity, histopathological analysis, tissue mycobacteria DNA demonstration or culture of mycobacterium. Herein we present an unusual case of lupus vulgar is type of cutaneous tuberculosis which presented as pyoderma gangrenosum like, which itself is a rare entity in Indian subcontinent.

Key words: Cutaneous tuberculosis, Mycobacterium tuberculosis, Pyoderma gangrenosum.

INTRODUCTION

Cutaneous tuberculosis presents in various morphological forms of which lupus vulgaris is the most common in Indian set up accounting for 55-59 % of skin tuberculosis cases in India. [1] Although mycobacterium tuberculosis infection usually involve lungs, but it can affect any part of body that too in atypical presentation. Lupus vulgaris is a chronic and progressive paucibacillary form that occurs in tuberculin sensitive patients with high immunity and high hypersensitivity. The most common site of involvement in Indian patients is buttocks, thighs and legs [2] and on the head and neck areas in western countries. [3] The commonly seen morphological forms are plaque, papular, nodular, vegetative, tumor like and ulcerative. The pyoderma gangrenosum (PG) is a rare, non infectious, idiopathic neutrophilic dermatosis associated with underlying systemic disorder. The commonly recognized types includes: ulcerative, pustular, bullous, vegetative and peristomal PG. The ulcerative form of lupus vulgaris may mimic pyoderma gangrenosum and can lead to misdiagnosis and incorrect treatment. Herein, we report a case of cutaneous tuberculosis which was managed as pyoderma gangrenosum initially and later on came to be an ulcerative form of lupus vulgaris.

CASE REPORT

A 27 year old female presented with painful, ulcerative lesion over lower back to start with, which progressed to involve gluteal regions, thighs and groin within one month. The lesion was associated with history of intermittent fever, joint pains with swelling both knee and ankle joints. Patient

had similar lesion over chin at the age of 5 years which healed with scars without treatment. There was no history suggestive of pathergy. There were no complaints of cough, haemoptysis, and shortness of breath, yellow discoloration of eyes, pain abdomen and blood in stool, oral or genital ulcers. The General physical and systemic examination was normal. Local examination revealed a single well defined, tender ulcer having irregular margins with violaceous borders of size approximately 40x30 centimeters covered with necrotic slough over the lower back, buttocks, groins and thighs (Figure 1). There was cribriform scaring over face, forearms neck, abdomen and legs. All the laboratory findings were normal except for raised ESR (58 mm in 1st hour), microcytic hypochromic anemia in peripheral blood smear and bronchiectatic changes in the chest radiograph. The Rh factor and HIV screening test was negative. The ZN staining of pus, sputum examination was negative for AFB and Mantoux test was strongly positive.

Based on clinical and laboratory investigation a preliminary diagnosis of pyoderma gangrenosum was kept with differential diagnosis of lupus vulgar is and patient was given systemic corticosteroid under the cover of antibiotics. There was no response to one month treatment. On further investigations HRCT chest revealed fibrocavitary changes bilateral upper lobes, right medial lobe suggestive of post tubercular changes. No mycobacterial DNA was detected on tissue PCR. The histopathology report showed epithelioid cell granuloma, mixed inflammatory cell infiltrate, langhan, foreign body type of giant cells with areas of fibrinoid necrosis and degenerated collagen extending up to subcutaneous tissue, which was suggestive of lupus vulgaris (Figure 2).

The diagnosis of cutaneous tuberculosis (Lupus vulgaris) was considered and patient was started on antitubercular chemotherapy. After one month of therapy, patient showed marked improvement with decrease in pain and size of ulcer. After six months of treatment there was no sign of recurrence and ulcer healed completely (Figure 3). Patient completed nine months of ATT (DOTS).

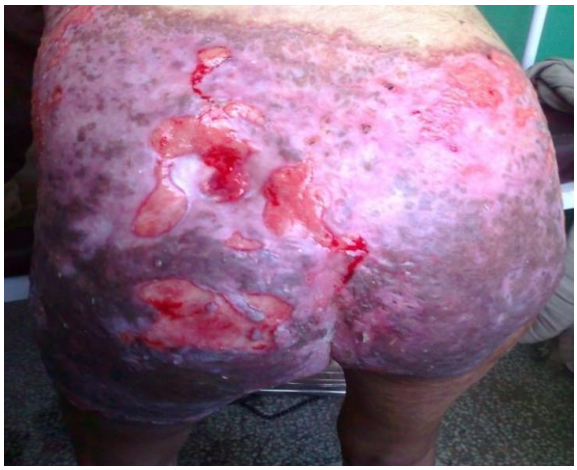

Figure 1: Well defined single ulcerated plaque over buttocks and adjoining area.

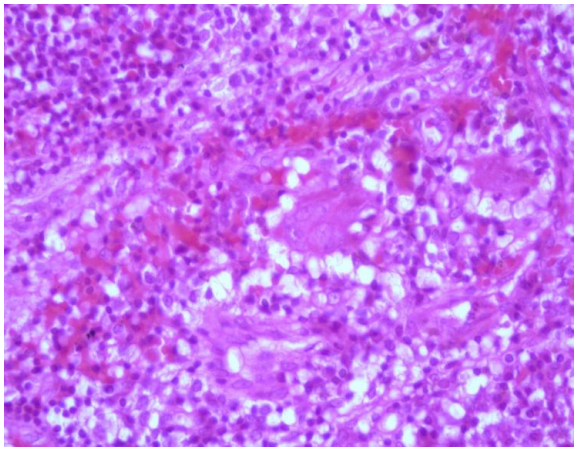

Figure 2: HPE showing epithelioid cell granuloma, langhan, foreign body giant cells and fibrinoid necrosis.

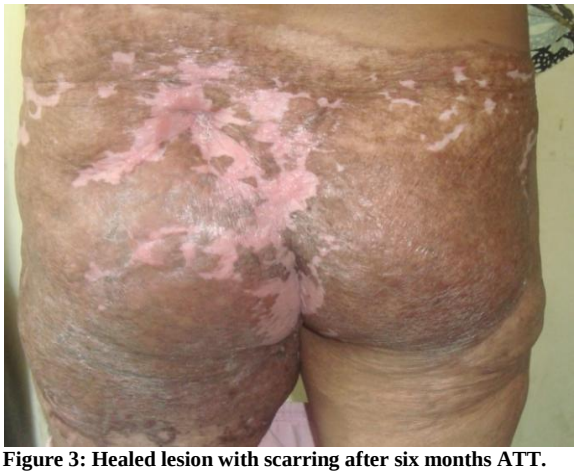

Figure 3: Healed lesion with scarring after six months ATT.

DISCUSSION

Pyoderma gangrenosum (PG) is a chronic ulcerative, rare dermatosis

associated with underlying systemic disorder. The ulcerative variant is recognized by small tender red blue papules, plaques or pustules which rapidly progress to painful ulcer with characteristic violaceous undermined edges. The disease is frequently associated with underlying systemic conditions in the form of inflammatory bowel disease, arthritis, monoclonal gammopathy or internal malignancy. The other disorders like vasculitis, vaso-occlusive disease, neoplasms, infections, external tissue injury and inflammatory disorders can cause ulcerations resembling pyoderma gangrenosum. Therefore pyoderma gangrenosum remains a diagnosis of exclusion.

The characteristic clinical and morphological presentation in this case simulated pyoderma gangrenosum. The absence of response to antibiotic therapy and the early response to corticosteroids further confused the diagnosis. Upon presentation, the differential diagnoses included were pyoderma gangrenosum and ulcerative lupus vulgaris.

The diagnosis of cutaneous tuberculosis is normally made by clinical and histopathological data. Laboratory methods such as Mantoux test, culture of bacilli, and tissue PCR tests are supportive of the diagnosis. A therapeutic trial with antitubercular drugs lasting 4-6 weeks is indicated in difficult cases [4] where as such prevalence of tuberculosis is high. This case was difficult to diagnose due the atypical presentation and the inconclusive laboratory analyses except for Mantoux test and histopathology report. The rapid response to ATT confirmed the correct diagnosis.

CONCLUSION

Apart from the clinical and laboratory investigations of atypical presentation of cutaneous tuberculosis the prompt histopathological examinatition is imperative for the correct diagnosis and early treatment. Even though pyoderma gangrenosum itself is rare and such presentation in Indian set up make differentiation diagnosis difficult. So the histopathological examination is key to establish the diagnosis. Prognosis of cutaneous tuberculosis is excellent and timely treatment with ATT can reduce the morbidity of the disease.

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