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PhotoDermDiagnosis

An indolent annular plaque on the buttock

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A 45-year-old female presented in the outpatient department with a six-year history of an erythematous annular plaque on the buttocks. The lesion started as a papule on the left buttock. It was mild itchy but there was no pain or any discharge. It increased in size gradually and involved both the buttocks reaching its present size in six years. Periodically, she took some topical and systemic treatment, but of no avail. Her systemic review was unremarkable.

On examination, there was a 25x20cm annular plaque having hypertrophied margins and central atrophy involving both buttocks (**Figure 1** and **2**). Rest of the body, mucosae, and teeth were unaffected. Her general and systemic examination did not reveal any abnormal finding.

Investigations revealed normal blood counts, urine examination, blood sugar, liver function tests, blood urea and serum creatinine. ESR was 20mm after 1st hour. Mantoux test was strongly positive. Chest X-ray showed no abnormality.

Histopathology of the lesion showed well-formed granulomas composed of epithelioid cells in the dermis with many giant cells (**Figure 3**).

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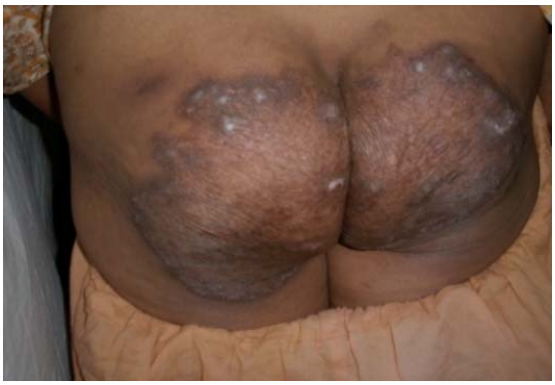

Figure 1

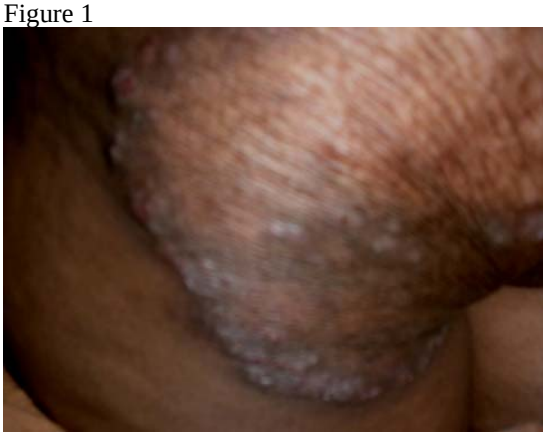

Figure 2

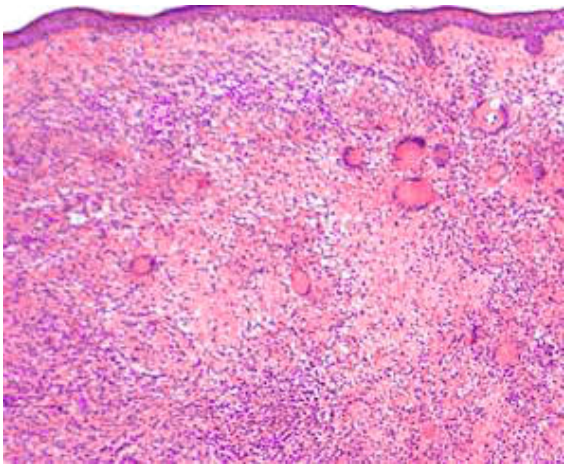

Figure 3

What is the diagnosis?

Diagnosis

Lupus vulgaris

Discussion

Lupus vulgaris (LV) is a chronic progressive post-primary, paucibacillary type of cutaneous tuberculosis occurring in a patient with moderate or high immunity.[1] Causative organisms are *Mycobacterium tuberculosis*, *M. bovis* and/or bacillus of Calmette and Guerin.[2] LV may appear at sites of inoculation, in scrofuloderma scars, BCG vaccination site[3] or most commonly at distant sites from the initial infectious focus. The spread may be hematogenous or lymphatic.

The characteristic lesion is a plaque composed of grouped red brown papules, which on diascopy have pale brownish yellow or apple colour (apple jelly module). The papules tend to heal slowly in one area and progress in another.[2,4] They are minute, translucent and embedded deeply and diffusely in the infiltrated dermis, expanding by the development of new papules at the periphery which coalesce with the main plaque to become gyrate or discoid. The plaques are slightly elevated and often are covered by adherent scale. On involution, atrophy and deforming scarring may occur.[4]

90% of LV lesions occur on head and neck. In the Indian subcontinent buttocks are also a common site.[5] If lesions involve the nose or the earlobes which shrink after involution, as if nibbled away (that is why it is called lupus).[6] On the trunk and extremities lesions may be annular or serpiginous or may form gyrate patterns.[4,5,6] On hands and feet and around the genitals or buttocks it may cause mutilation by scarring, warty thickening and elephantiastic enlargement.[4,5,6]

There are different clinical forms of LV: these are plaque; ulcerative and mutilating; vegetating; tumor like; papular and nodular and with mucosal involvement.[4,5,6] Plaques of LV may mimic chronic leishmaniasis, leprosy, tinea corporis, deep mycoses, sarcoidosis, mycosis fungoides or other chronic granulomatous diseases or cutaneous malignancies.[4,5,6]

Diagnosis in endemic areas does not pose a problem. AFB are usually not demonstrated as it is a paucibacillary form of cutaneous TB.[4,5,6] Culture or PCR remain the confirmatory tests.[7,8] Histopathology reveals tuberculoid granulomas composed of epithelioid cells and giant cells. Caseation necrosis within the tubercle is slight or absent.[9] Giant cells usually are of Langhan type, some are of foreign body type. There is associated infiltrate of lymphocytes. The inflammation is most marked in the upper dermis. In healing phase, extensive fibrosis may be present along with destruction of the cutaneous appendages. Secondary changes within the epidermis are common. These may vary from atrophy and ulceration to hyperplastic epidermis.[10] The proposed criteria for the diagnosis of cutaneous TB are shown in **Table 1**.[4]

In treating the patient of cutaneous tuberculosis search should be made for underlying focus of disease and coexistent infections as in the west tuberculosis is an AIDS defining disease.[11] A standard 6 months regimen for adults is now

Table 1 Criteria for diagnosis of cutaneous tuberculosis [4]

Absolute
1. Positive culture of mycobacterium tuberculosis.
2. Successful guinea pig inoculation.
3. Identification of mycobacterial DNA by PCR
Relative
1. Presence of active tuberculosis elsewhere in the body.
2. Presence of AFB in the lesion.
3. H/P consistent with Tuberculosis.
4. Positive tuberculin reaction
5. Suggestive history and physical signs
6. Effect of specific therapy

recommended: isoniazid (300mg daily); (450mg daily for patients weighing less than 50kg and 600mg daily above this weight) for 6 months; pyrazinamide (1.5gm daily weighing less than 50kg and 2.0gm for patients weighing more than 50kg) for two months; ethambutol (15mg/kg body weight) for two months.[12]

Prognosis without treatment is poor and spontaneous remission does not occur.[13] Scarring, contractures and tissue destruction are common complications. Squamous cell carcinoma, basal cell carcinoma and sarcoma may occur at the site of lesion.[14]

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