

Coexistence of an Unusual Form of Scabies and Lepromatous Leprosy

A Case Report

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SUMMARY

*A case of unusual crusted (Norwegian) scabies involving the entire skin of a 26 year old Brazilian patient with lepromatous leprosy is reported. The more prominent histopathological findings were acanthosis, hyperkeratosis and crusting with many mites of *Sarcoptes scabiei*. In the dermis, numerous foamy histiocytes filled with abundant acid-fast bacilli were seen.*

Introduction

Infrequently, an infestation by the mite *Sarcoptes scabiei* becomes widespread and the patients acquire thick crusted lesions containing numerous burrows and mites. The disease is called hyperkeratotic scabies, crusted scabies or Norwegian scabies because it was first reported in patients with Hansen's disease from Norway by Danielssen and Boeck in 1848. This condition is highly contagious¹ and usually responsible for the outbreaks of local epidemics⁵. Crusted scabies is rarely found in otherwise healthy individuals. Sometimes it is seen in immunosuppressed patients with chronic disease, or patients suffering from malnutrition². Clinical diagnosis may be a problem⁶.

The objective of this report is to describe an uncommon case of lepromatous leprosy associated with crusted scabies, with emphasis on the histomorphological features.

Case Report

A 26 year old black man complained of pain and swelling in the legs for two years, followed by the development of multiple tender subcutaneous nodules which were distributed over his arms and hands, associated with altered sensibility. There was mild pruritus at night.

The entire skin of the patient was affected (Fig. 1). The skin was thickened and crusted, causing fissures. No definite diagnosis was made at first.

Biopsy was taken from a crusted lesion on the left knee. There were acanthosis and hyperkeratosis. The mean depth of the epidermis was $1,732 \pm 60 \mu\text{m}$; the stratum corneum alone had an average thickness of one millimeter. There was also crusting and the presence of multitudes of pearl-shaped mites, located in channels in the stratum corneum and within the sub-corneal region (Fig. 2). Focal intraepidermic micro-ab-

scases with neutrophils and eosinophils were present. In the upper dermis, the perivascular areas and the interstitium had infiltrates composed of a moderate number of lymphocytes, a few histiocytes and numerous eosinophils. There was also a conspicuous angiomatoid pattern of vascular proliferation with hyperplasia of endothelial cells, usually filled with acid fast bacilli. In the lower dermis, there were many loosely infiltrated areas with small clusters of lymphocytes, round cells and numerous foamy histiocytes (Fig. 3), most of them filled with large numbers of viable acid-fast bacilli. The distance from the lower limit of the epidermis to the upper limit of the macrophagic cellular infiltrate with the bacillary mass was in average $438 \pm 55 \mu\text{m}$.

Based on histological evaluation, the diagnosis of lepromatous leprosy accompanied by crusted scabies was made. Treatment with multi-drug therapy (MDT) as recommended⁴ for multibacillary leprosy patients was started. When necessary, thalidomide and/or prednisone was given for the control of lepra reactions. Successful cure of crusted scabies occurred after four weeks of treatment with topical monosulfurum. The patient's general health condition improved considerably.

Discussion

Ordinary scabies is one of the cutaneous disorders occasionally described among leprosy patients^{7,8}. However, the event of crusted scabies and the coexistence of lepromatous leprosy in a patient is rare, but not surprising because the immunosuppression is frequently found in lepromatous leprosy^{3,8}. The question



Fig. 1. Appearance of the left hand and knee at the time of diagnosis. Note scaly plaques and crusts.



Fig. 2. Skin from a crusted lesion on the left knee. Sections of many burrows and mites of *Sarcoptes scabiei* are in the hyperkeratotic horny layer. H&E 80 ×.

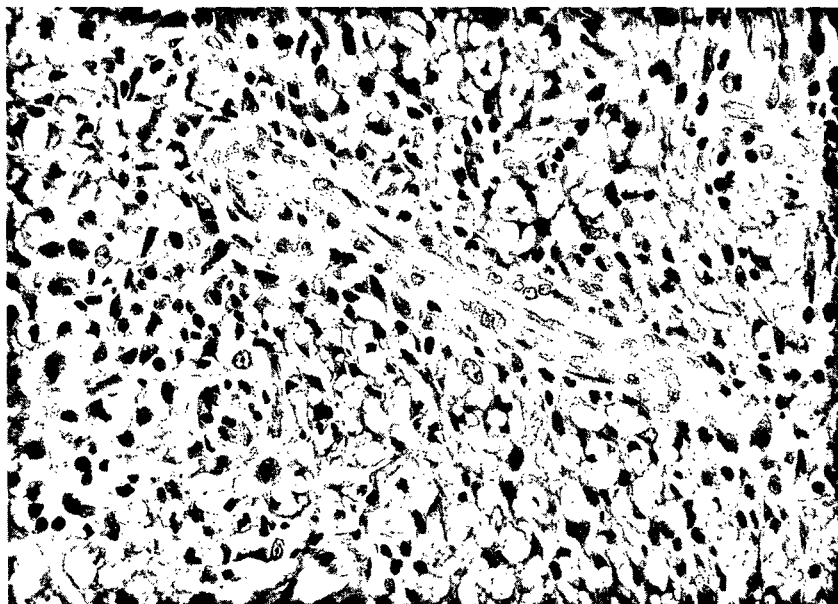


Fig. 3. Skin biopsy; untreated lepromatous leprosy. Numerous foamy histiocytes filled with large numbers of bacilli, forming clumps and globi. H&E 320 ×.

requiring further investigation is whether a generalized impairment of cell-mediated immunity, predisposes an infestation like the present case of crusted scabies.

In tropical areas like Bahia where leprosy is endemic, the association with crusted scabies seems to be sporadic. However, the epidemiological importance of their co-existence with leprosy is evident. In view of its contagious nature, physicians should be aware of this possibility in a leprosy patient who develops a widespread hyperkeratotic eruption.

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