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Palmo-Plantar Nodular Lesions in Lepromatous Leprosy

TO THE EDITOR:

Mycobacterium leprae has the unique ability among all mycobacteria to utilize DOPA by virtue of the enzyme diphenol oxidase ([10]). Cells of neural crest origin, e.g., Schwann cells, cells of the adrenal medulla and perineurial cells, can convert tyrosine to DOPA, offering an explanation for unusual tissue specificity of *M. leprae* ([10]). Another special feature of this organism is that it possesses a distinct predilection for the cooler portions of the body ([2, 3, 8]). Brand ([3]) observed that tendons, cartilage and bones are subject to active infection by *M. leprae* only when they lie close to the skin where the temperature is low. Based on this concept, the axilla, groin, perineum and narrow transverse band of skin over the lumbosacral region are described as "immune zones" for *M. leprae* because of their relative warmth ([4]). Even though palmoplantar skin is not included in the "immune zones," its involvement in leprosy is comparatively rare ([1, 9, 11]). All earlier reports on palmo-plantar involvement are in paucibacillary cases ([9, 11]) and in only a single case of histoid leprosy ([1]). However, the literature is silent on lepromatous leprosy in this regard. In this communication we are reporting on a lepromatous leprosy patient with nodular lesions over the palms and soles.

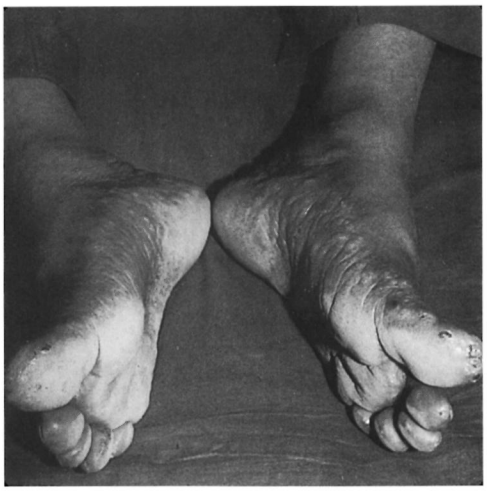

FIG. 1. Feet of patient showing plantar nodule lesions.

A 40-year-old male presented to us with "glove-and-stocking" anesthesia and nodular infiltration over the palms, soles and back of elbows (Figs. 1 and 2). The nodules were shiny, smooth, well-demarcated, and 1–2 cm in size, forming almost confluent plaques. The patient also had a few ill-defined partial anesthetic patches on his back and buttocks, infiltration of both earlobes (Fig. 3) and loss of the lateral third of his eyebrows. The ulnar, common peroneal and greater auricular nerves were enlarged bilaterally and nontender. A bacterial index by slit-skin smear was 5+ from the earlobe, eyebrows and one of the nodules. Histopathology from nodular lesions was consistent with lepromatous leprosy.

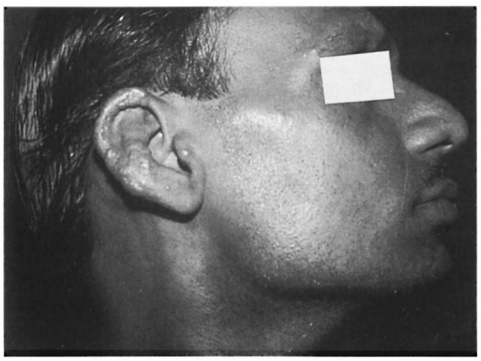

FIG. 3. Side view of patient showing nodular infiltration of earlobe.

Sabin, *et al.* ([12]) have shown that the temperature of the nerve bed is directly related to the depth of the tissues. There is a fairly good amount of fibro-fatty tissue on the palms and soles which ensures an insulating

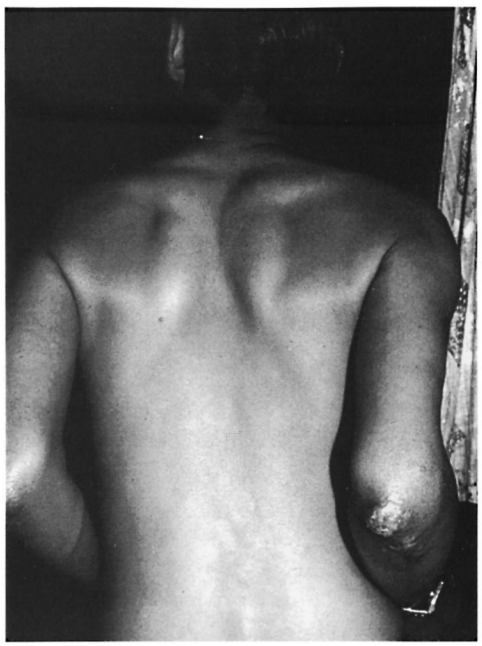

FIG. 2. Back view of patient showing nodules on back of elbow.

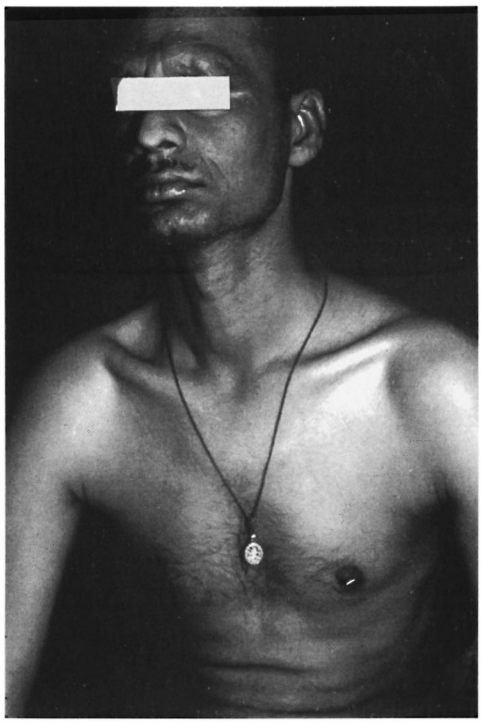

FIG. 4. Frontal view of patient showing chest relatively free from lesions.

property and, hence, a high nerve bed temperature ([7]). The epidermis is also thicker on the palms and soles compared to other superficial skin areas and, hence, more warm ([4]). These are probably the reasons for infrequent involvement of the palms and soles in leprosy. However, in our patient the palms and soles were predominantly involved and the classical sites of lepromatous leprosy, including the back, chest, thighs, arms and abdomen, were relatively free. It is possible that the temperature dependency of *M. leprae* is not absolute, as evident by the fact that *M. leprae* survive in warm sites such as bone marrow ([13]), lymph nodes ([6]), and liver ([5]). This reasoning may partly explain the paradoxical distribution of lesions in our patient.

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Posterior Chamber Intraocular Lens Implantation in Smear-Positive Leprosy Patients; a Preliminary Report

To the Editor:

Cataracts in leprosy patients can a) evolve as a consequence of uveitis, b) manifest as a result of steroid therapy, or c) occur as part of the aging process. Age-related cataract may soon become a leading cause of blindness among leprosy patients in endemic areas.

The best way to rehabilitate patients with age-related cataract is by extracting the cataract and implanting an intraocular lens. There are no reports available in the literature that describe this procedure having been done on multibacillary leprosy patients whose skin smears were positive for acid-fast bacilli (AFB). We report here three posterior chamber intraocular lens implantations into the eyes of two lepromatous patients whose skin smears demonstrated AFB at the time of surgery.

CASE REPORT 1

A 35-year-old man with lepromatous leprosy, confirmed by histopathology, had completed 2 years of multidrug therapy (MDT). During this time and after the completion of his MDT, he had had several