

## SCAR LEPROSY FOLLOWING NEEDLE INOCULATION

Sir,

Although inoculation leprosy following mechanical trauma such as tattooing<sup>1-3</sup> vaccination,<sup>4</sup> dog bite,<sup>5-6</sup> or roadside injury<sup>7,8</sup> is well documented, it is as yet sparingly reported. The case reported here is of a 12-year-old boy who presented with numbness and tingling of 5 years' duration over the outer aspect of the left arm. He had been given an intradermal injection of smallpox vaccine on this site a few days after birth. He started experiencing numbness, tingling and heaviness over the scar mark 7 years later. Subsequently, his mother noticed a peculiar change in the colour of the skin. It was fainter than the surrounding skin. Ever since it has continued to progress and erythema and scaling appeared over it. At present, the patch is prominent and completely numb.

Cutaneous examination revealed a single, conspicuous hypopigmented plaque of the size of 7 × 5 cm. Its margins were serrated and clearly defined. The periphery of the lesion was indurated, while its centre had a scar mark of 1 × 1 cm size. The lesion was erythematous, dry, scaly and showed loss of sweat. The plaque had impairment of temperature touch and pain sensation. The nerves supplying the plaque were greatly thickened and tender.

A haematoxylin-eosin stained section revealed a compact granuloma formed by epithelioid cells, lymphocytes and attempted giant cells. The granuloma was situated in the upper dermis. The nerves were infiltrated and identifiable. No acid-fast bacilli could, however, be seen in the Zeihl–Neelsons stained section.

Ordinary skin slit smear examination revealed no acid-fast rods. A lepromin test (early-Fernandez reaction) was 15 mm (+ +).

Laboratory investigations were Hb 12.5 g%, TLC 4800/Cmm; DLC, P56% L34% M2% E8%, RBCs, normochromic, normocytic, platelets adequate, total T-lymphocytes 34%, Tpan 55% B, cells 26%, T-4 subsets, 26%, T8 subsets 22%, IgG 1980 mg/dl, IgA 340 mg/dl, IgM 162 mg/dl and complement C<sub>3</sub> 67.5 mg/dl.

Based on the preceding parameters, the diagnosis of borderline–tuberculoid leprosy was formed.

It is, indeed, intriguing to note that most of the cases of inoculation leprosy reported thus far have manifested either as tuberculoid (TT) borderline–tuberculoid (BT) or indeterminate (I), that too, affecting the uncovered areas.<sup>9</sup> This is a salient observation and may explain that some known or unknown mechanical factors which cause discontinuity or abrasion of the skin serve as the nidus for implantation of *Mycobacterium leprae*. It is likely that the very lodgement of the organisms in the tissue subserves as a microvaccine causing resultant localized phenomenon.

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