

## Letters to the Editor

### TUBERCULOID (TT) LEPROSY; LOCALIZATION ON A TATTOO

Sir,

The precise mode of transmission of leprosy is still unknown. However, the skin, nasal mucosa and gastrointestinal tract have been favoured as the possible portal/s of entry of *Mycobacterium leprae*.<sup>1</sup> Prolonged and intimate skin-to-skin contact with infected individuals is universally accepted. Alternately the bacilli might enter the body through needle inoculation,<sup>2</sup> for example, tattooing.<sup>3-6</sup> Tattooing is common in Asian and African countries where leprosy is endemic. Leprosy occurring at a tattoo or scar, though infrequent, may be of epidemiological interest, concerning *M. leprae*'s preference for settling in tattoos and scars. This is illustrated in the following recount:

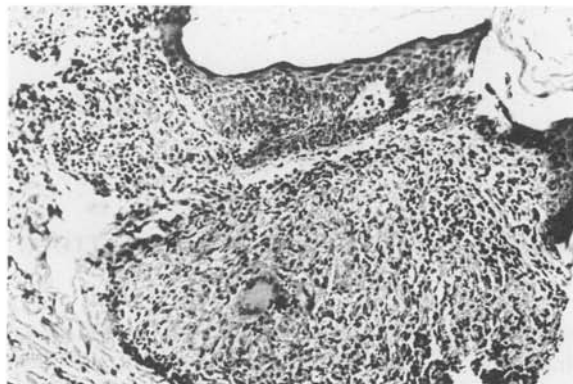
#### *Case report*

V, a 35-year-old woman, was tattooed about 20 years ago. A year later she noticed a small erythematous patch on and around the tattoo mark over the back of her right wrist. The patch was asymptomatic for almost 15 years, after which she noticed an increase in its size which was primarily confined to the tattoo mark. She also experienced numbness and tingling in the right forearm and conspicuous impairment of sensation in the patch. Simultaneously she noticed a similar eruption over the index finger of the right hand. Here too, she had numbness and tingling along with impaired sensation.

On examination an erythematous and glazed plaque of 4 cm × 3 cm was seen. It was well defined, had regular borders, no atrophy was noticed and infiltration was marked at the periphery (Figure 1). Another plaque of similar morphology was seen on the dorsum of the index finger of the same hand. Sensations of temperature, touch and pain were impaired over the lesions and the right ulnar



**Figure 1.** A well-defined plaque with regular outline. Centre is marked by tattoo.



**Figure 2.** A well-formed granuloma comprising lymphocytes, epithelioid cells and giant cells located beneath the epidermis with the infiltration of cells in the epidermis (H&E  $\times$  100).

nerve was found to be thickened and tender. Haematoxylin and eosin stained sections revealed a granuloma formed by a large number of lymphocytes, epithelioid cells and giant cells. The granuloma was well formed and located just below the epidermis. Some of the cells were seen infiltrating the epidermis (exocytosis) (Figure 2). The nerve in the granuloma could not be identified and no acid-fast bacilli could be demonstrated in tissue sections and slit-skin smears. Lepromin (Mitsuda) was strongly positive. The diagnosis of tuberculoid leprosy (TT) was thus confirmed and the patient has been prescribed multidrug therapy comprising of 600 mg rifampicin once a month and 100 mg of diaminodiphenyl sulphone daily.

V N SEHGAL  
& JOGINDER

*Department of Dermatology and Venereology  
Maulana Azad Medical College  
New Delhi (India)*

## References

- <sup>1</sup> Anonymous. *Epidemiology of leprosy in relation to control*. Technical report series No. 716. WHO: Geneva, 1985 page 21.
- <sup>2</sup> Sehgal VN. Inoculation leprosy, current status. *Int J Dermatol*, 1988; **27**: 6–9.
- <sup>3</sup> Lowe J, Chatterjee SN. Scarification, tattooing etc. in relation to leprosy lesions in the skin. *Lepr India*, 1939; **11**: 14–18.
- <sup>4</sup> Sehgal VN. Inoculation leprosy appearing after seven years of tattooing. *Dermatologica*, 1971; **142**: 58–61.
- <sup>5</sup> Sehgal VN. Upgrading borderline tuberculoid (subpolar tuberculoid) leprosy in tattoos. *Int J Dermatol*, 1987; **26**: 332–3.
- <sup>6</sup> Porritt RJ, Oslen RE. Two simultaneous cases of leprosy developing in tattoos. *Am J Pathol*, 1947; **23**: 805–7.