Borderline tuberculoid leprosy with type 1/reversal reaction

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DESCRIPTION
Leprosy remains a common cause of peripheral neuropathy in the Indian subcontinent.1 Clinical manifestations include skin lesions, peripheral nerve involvement in the form of numbness or weakness or painless non-healing ulcers in anaesthetic hands or feet.2 ‘Type 1’ reactions are typically seen in patients with an unstable immunological response. They may occur in patients with borderline tuberculoid (BT), mid-borderline and borderline lepromatous leprosy and present as erythema and oedema of existing skin lesions, eruption of fresh lesions, inflamed nerves and sensory or motor symptoms.3 Lesions in BT leprosy are like tuberculoid leprosy but smaller and more numerous with less nerve enlargement. This form may persist, revert to tuberculoid leprosy or may advance to other forms.4

We present images of a 24-year-old man diagnosed with BT leprosy on right greater auricular nerve biopsy (figure 1). He presented with classical clinical features including thickened inflamed nerves, right lower motor neuron-type facial nerve palsy (figure 2), painless non-healing ulcers on hands and feet (figure 3), clawing of hands (figure 4) and hypopigmented skin patches. Within a week of starting multidrug therapy (rifampicin, dapsone and clofazimine) he developed an erythematous, painful rash on the right side of the face, a manifestation of type 1 reaction (figure 2). A biopsy from the skin showed a granulomatous reaction with histiocytes and epithelioid cells (figure 1). His condition improved after initiation of multidrug therapy (figure 3).

Figure 1  Histopathology slide of nerve biopsy showing histiocytes and epithelioid cells (marked with pointed arrows; H&E ×40).

Figure 2  Post-therapy clinical photograph (3 weeks after initiation of multidrug therapy). Right lower motor neuron facial palsy depicted by weak eye closure, flattened right naso labial fold.

Figure 3  Pretherapy clinical photograph showing painless, non-healing trophic ulcers in feet.
reversal reaction (figure 5). Over the next few follow-up visits, we also noticed hyperpigmentation of skin on his back, most probably clofazimine-induced (figure 6). These classical images of leprosy are a reminder to medical students and practicing physicians of the importance of maintaining diagnostic skills in recognising this ancient disease.

**Learning points**

- Leprosy causes painless, non-healing ulcers, clawing of hands, hypopigmented anaesthetic patches, thickened nerves and lower motor neuron facial palsy.
- Type 1 reversal reaction can present as lesions of the skin, eruption of newer skin lesions, inflamed nerves and sensory or motor symptoms.
- Antileprosy drug clofazimine has hyperpigmentation as a major cosmetic side effect.

**Contributors**

SJK has contributed substantially to the conception design of the work; the acquisition, analysis or interpretation of data for the work contributed by AJD and SJK. AJD has contributed in drafting the work or revising it critically for important intellectual content; and also final approval of the version to be published.

**Competing interests**

None.

**Patient consent**

Obtained.

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**REFERENCES**
