RELAPSE OR REVERSAL REACTION: THE CASE FOR A THERAPEUTIC TRIAL OF STEROIDS

Sir,

In paucibacillary patients, it is often difficult to distinguish between relapse and type I reversal (upgrading) reaction.[1–3] By definition, relapse is a recurrence of leprosy either during the surveillance period or thereafter. Reversal reaction means acute exacerbation of some or all existing lesions and the appearance of new lesions with neuritis.[4] Reaction should be recognized early and treated in time to prevent deformities. In both relapse and reversal reaction, new lesions occur which appear erythematous and oedematous and there may be associated neuritis. Severe neuritis is seen more often in reversal reaction than in relapse.[5] Differentiating relapse alone, from relapse with reversal reaction, is also difficult, especially when the relapsed lesion undergoes reaction very soon, as in the case we describe below. If histological examination of the lesion can be done, it may be possible to differentiate relapse and reversal reaction, but this facility is not universally available, especially under field conditions. Hence we propose that it is better to give a therapeutic trial with prednisolone, 30 mg daily for 10–15 days, which will control and suppress the reversal reaction, but not the relapsed lesions. Any infection, including leprosy, is disseminated and masked by steroids, but when simultaneous antileprosy treatment is given, dissemination of infection is not a problem. It has, in fact, been shown in mice experiments that steroids do not increase the multiplication of *Mycobacterium leprae*.[6]

Case report

K, male, aged 30 years, appeared in the out-patient clinic of this Institute in 1967 with numerous erythematous and infiltrated skin lesions and thickening of nerves. His skin smears were positive for AFB. A provisional diagnosis of borderline leprosy was made and this was confirmed on biopsy. The lepromin test done at that time was weakly positive. He was treated with dapsone regularly and became clinically inactive and bacteriologically negative. In 1982, the patient was advised to stop dapsone treatment and to report complaints, if any, in the future. He was under surveillance till July

1986, when he presented himself with many new lesions, of small to medium size, of 1 month duration over face, abdomen, front and back. The lesions had well-defined margins; they were erythematous, swollen and with a smooth and dry surface. The peripheral nerves were not thickened. One plaque on the left side of the face near the eye was large in size with impending lagophathalmos. We were not sure of neuritis of left facial nerve twigs supplying oribularis oculi muscle. A biopsy of the lesion on the abdomen was done and sent for histopathological examination. The patient was treated with steroids, i.e. prednisolone 40 mg daily along with multidrugs of paucibacillary regimen, i.e. rifampicin, 600 mg monthly supervised, and dapsone, 100 mg daily. After 10–15 days of steroid therapy the patient recovered from the impending lagophthalmos and the oedema of the plaque on the face cleared; the other erythematous and oedematous lesions of skin became pale and flattened. With a further course of steroid therapy the patient recovered completely from his ocular weakness on the left side, and all dermal lesions became flat. Our diagnosis of the case as a reversal (upgrading) reaction was confirmed by the histopathology report which showed it as BB (mid-borderline) leprosy with reversal reaction.

Comment

There is no doubt that it is difficult to distinguish relapse from reversal reaction by clinicobacteriological examination alone. Histopathology may be helpful, but the non-availability of such a facility in many programmes and the time taken for the report to be available, seriously delays the diagnosis of reversal reaction and its effective management. Hence we recommend a simple course of prednisolone, 30–40 mg daily for 2 weeks, to see if the signs of suspected reversal reaction subside (erythema and oedema of dermal lesions). In such cases the disease will not flare up or disseminate if the patient is given antileprosy drugs simultaneously. The use of corticosteroids in field situations in optimum dosage is also recommended by other workers.[7–9] Wheate[5] states that it is a difficult task to differentiate between relapse and reversal reaction in the field and that precise criteria should be developed to identify these 2 conditions. We suggest that the clinical response to steroids may be a valuable indicator in this context.

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