# THE RISK OF STANDARDIZED REGIMENS OF CORTICOSTEROIDS FOR THE TREATMENT OF LEPROSY REACTIONS IN THE FIELD

Sir,

Acute nerve damage due to leprosy reactions can often be treated successfully with corticosteroids. To make this treatment widely available under field conditions, standard steroid regimens are required. Courses of 12 weeks for paucibacillary (PB) patients and 20 weeks for multibacillary (MB) patients have been recommended.[1] The initial dose is 40 mg daily, given for 2 weeks and then tapered off. These kind of standard regimens are gradually being introduced into field programmes, but general introduction is delayed for fear of the complications of corticosteroid use. There is uncertainty about the frequency of occurrence of complications and anxiety that they might be overlooked by paramedical staff.

In this respect we would like to refer to an important article published recently titled "Corticosteroids and peptic ulcer: meta-analysis of adverse events during steroid therapy."[2]

The objective of this meta-analysis was to determine whether corticosteroid therapy induces the development of peptic ulcers and putative complications of steroid therapy. It was a retrospective investigation in which all (known) randomized, double blind, controlled trials in which steroids had been administered were analysed. The number of episodes of peptic ulcer, dermatological effects, sepsis, diabetes, hypertension, osteoporosis, psychosis and turberculosis reported in both the placebo and steroid groups were compared. Of 1857 articles, 93 satisfied the requirements of the authors and were analysed by means of meta-analytic techniques. A total of 6602 patients were included. The relative frequencies of each of the eight mentioned complications were compared in the placebo and steroid groups. Subgroups were studied of patients who received treatment for 1 to 7 days, 1 week to a month, 1 to 3 months and more than 3 months.

The results showed that 0·3% of patients in the placebo group and 0·4% in the steroid group were reported to develop peptic ulcer, the difference not being significant ($P > 0.05$). Dermatological side-effects occurred four times as frequently in the steroid patients (10·5%) as in the placebo-treated control group (2·6%). Diabetes was reported four times more frequently in the steroid-treated patients (1·2%) than in the placebo-treated patients (0·3%). Hypertension was noted four to five times more frequently in the steroid-treated patients (0·9%) than in the groups

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that received placebo (0·2%). Psychological side-effects occurred two times more frequently in the steroid-treated patients (0·5%) than in the placebo-treated patients (0·3%). The differences in these last 4 categories are statistically significant. Bacterial sepsis, osteoporosis and tuberculosis all occurred more frequently in the steroid than in the placebo group, but the differences are not statistically significant. The main conclusion of the article is that peptic ulcers are a rare complication of corticosteroid therapy that should not be considered a contraindication when steroid therapy is indicated.

Of all patients included in this meta-analysis, the mean daily dose of prednisone was 35 mg (or its equivalent) for a mean duration of 64 days and a mean total dose of 2·2 g. This means that the study is very relevant for the use of corticosteroids for the treatment of leprosy reactions in field conditions. The 20-week course recommended by Rose & Waters, for instance, consists of 2·7 g of prednisone. It is of particular interest that certain well-known (and dreaded!) complications do not occur significantly more frequently in patients treated with steroid compared to the placebo-treated patients, or are rare (app. 0·5–1% of all patients). Dermatological effects (Cushingoid syndrome of moon face, buffalo hump and trunkal obesity, and acne and hirsutism) do occur in 10% of patients. Fortunately these symptoms are usually not dangerous and reversible after cessation of treatment.

Two important considerations must be borne in mind. Firstly the trials in the meta-analysis are primarily from developed countries. The risk for tuberculosis in a highly endemic country would be greater than reported in the meta-analysis. Secondly, patients entering trials were screened for disease before starting corticosteroids. The problems might be different if patients who were already diabetic or had active pulmonary turberculosis were commenced on treatment as could be the case in medically less well-supervised circumstances in the developing world. It is important that at least relevant basic examinations are done before patients are started on corticosteroids. It is also important that clear and strong criteria are maintained for commencing patients with reaction or signs of acute nerve damage on corticosteroids so that the benefits outweigh the risks. The known frequency of reactions offers a check to see how many patients would be expected to be treated with corticosteroids.

With this knowledge in mind, there should be more confidence in implementing standard steroid regimens for the treatment of leprosy reactions in field conditions. The benefit of saving peripheral nerves and thus preventing disability far outweigh possible complications of treatment with corticosteroids.

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## References

[7] Rose P, Waters MFR. Reversal reactions in leprosy and their management. *Lepr Rev*, 1991; **62**: 113–21.
[8] Conn HO, Poynard T. Corticosteroids and peptic ulcer: meta-analysis of adverse events during steroid therapy. *J. Int Med*, 1994; **236**: 619–32.