Letters to the Editor

Interaction Between Rifampicin, Steroids and Oral Contraceptives

We would like to draw the attention of leprosy workers to recent reports of the action of rifampicin (rifampin) in reducing the pharmacological effects of steroids (corticosteroids) when then given concurrently to patients. Edwards et al. (1974) were the first to describe a reduction in the pharmacological half life of cortisol in a patient with tuberculous Addison's disease being treated with rifampicin and replacement cortisone. Buffington et al. (1976) reported impaired renal allograft function when short-term rifampicin was given with methylprednisolone, and in one patient receiving 32-40 mg/day of the steroid for more than $1\frac{1}{2}$ years with no toxicity. when long-term rifampicin was stopped, signs of steroid toxicity dramatically appeared. These authors recommend that double dosage of steroid should be given when rifampicin is given concurrently. More recently Hendrickse et al. (1979) have reported the case of a boy suffering from nephrotic syndrome who failed to respond to steroid due to drug interaction with rifampicin, and warn about the risks of giving these two drugs together when treating conditions such as tuberculous meningitis. Rifampicin stimulates the production of hepatic microsomal enzymes which, in turn, increase the metabolic degradation of steroids and thus reduce their pharmacological effectiveness. Therefore we wish to warn leprosy workers to expect a poor response to steroid therapy for severe type 2 lepra reaction (ENL reaction) if rifampicin is being given at the same time.

Rifampicin also impairs the effectiveness of oral contraceptives (Skolnick *et al.*, 1976), and this could lead to an undesired pregnancy in a lepromatous woman of child-bearing age; worse still, if the woman is given thalidomide to control a prolonged and severe lepra reaction on the strength that the contraceptive pill will prevent pregnancy, the consequences could be disastrous.

W. H. JOPLING

33 Crown Lane Gardens, Crown Lane, London SW16 3HZ

J. H. S. PETTIT

Room 303, China Insurance Building, 174 Jalan Tuanku Abdul Rahman, Kuala Lumpur, Malaysia.

References

Buffington, G. A., Dominguez, J. H., Piering, W. F., et al. (1976). Interaction of rifampicin and glucocorticoids. Adverse effect on renal allograft function. J. Am. med. Ass. 236, 1958. Edwards, O. M., Courtenay-Evans, R. J., Galley, J. M. and Hunter, J. (1974). Changes in

cortisol metabolism following rifampicin therapy. Lancet 2, 549.

Hendrickse, W., McKiernan, J., Pickup, M. and Lowe, J. (1979). Rifampicin-induced non-responsiveness to corticosteroid treatment in nephrotic syndrome. *Br. med. J.* 1, 306.

Skolnick, J. L., Stoler, B. S., Katz, D. B. and Anderson, W. H. (1976). Rifampin, oral contraceptives, and pregnancy. J. Am. med. Ass. 236, 1382.