Volume 60, Number 1
Printed in the U.S.A.

CORRESPONDENCE

This department is for the publication of informal communications that are of interest because they are informative and stimulating, and for the discussion of controversial matters. The mandate of this JOURNAL is to disseminate information relating to leprosy in particular and also other mycobacterial diseases. Dissident comment or interpretation on published research is of course valid, but personality attacks on individuals would seem unnecessary. Political comments, valid or not, also are unwelcome. They might result in interference with the distribution of the JOURNAL and thus interfere with its prime purpose.

How Effective is Monthly Rifampin?

TO THE EDITOR:

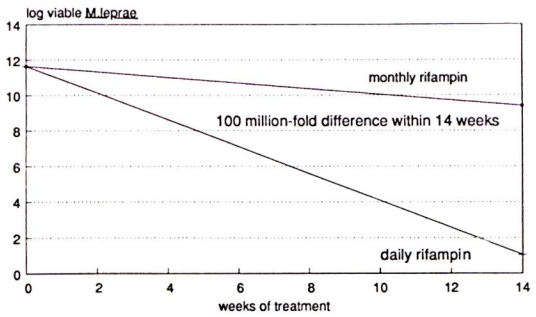
The World Health Organization (WHO) Study Group of 1982 ([6]) believed that ". . . there is no evidence that monthly doses of rifampin are less effective than daily doses." This view has since been refuted by the following evidence.

Viable *Mycobacterium leprae* declined at the average rate shown in The Table ([1]) during treatment of infected mice with rifampin at 10 mg/kg/day (by gavage). The calculations use standard methods ([2]) based on ID50s. Viable *M. leprae* decline at a rate of at least 0.249 per day during daily rifampin treatment but no more than 0.053 per day during treatment with rifampin monthly.

A patient ingesting only the monthly supervised rifampin doses of the WHO multidrug therapy regimen (WHO MDT) is predicted to have, after 14 weeks, at least 100 million times more viable *M. leprae* than a patient ingesting rifampin daily (The Figure). This vast difference is expected to be missed by methods, such as examination of skin smears or biopsies, which do not adequately distinguish between viable and nonviable acid-fast *M. leprae.*

The supervised monthly ingestion of rifampin is, therefore, a relatively ineffective safeguard against the failure of some patients to ingest their prescribed drugs regularly. A monthly injection of dapsone ([5]) is at present the only method of fully supervised intermittent chemotherapy which does not involve important sacrifice of efficacy against *M. leprae.*

The role of monthly rifampin in the treatment of leprosy is questionable on biological grounds.



THE FIGURE. Predicted decline in viable *M. leprae* according to frequency of rifampin doses in lepromatous leprosy patients based on measured rate of decline among viable *M. leprae* in mouse experiments.

THE TABLE. *Average rate of decline in viable* M. leprae *according to frequency of rifampin doses.*

Data source	Rate of decline/day with rifampin given	
	Monthly	Daily
J,[a] Table 9, 4 × 4 weeks	0.035 to 0.053[c]	
G,[b] expt. 1, 0–4 weeks	0.004 to 0.140	
G, expt. 1, 0–6 days		0.249 to 0.902
G, expt. 1, 0–4 weeks		0.179 to 0.314

[a] J = Ji, *et al.* ([4]).
[b] G = Grosset and Guelpa-Lauras ([3]).
[c] 99% confidence limits.

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Intralesional Variation in Histology

TO THE EDITOR:

The clinical note by Job, *et al.* (IJL 1991: 59:116–119) describing the histological picture from tuberculoid through what appears to be borderline tuberculoid (BT) to lepromatous pathology from the deeper to the superficial layers of the dermis, with a thin subepidermal clear zone, co-existing in the same lesion along with a hypopigmented lesion elsewhere in the body of a 10-year-old boy only goes to show that we are rediscovering things that have been known before. Job, *et al.*'s note may be the first clear-cut documentation of this occurring, but the appreciation of this phenomenon of co-existing lesions of varied histology at different sites of the same patient, or in the same lesion, has been known even before the Ridley-Jopling (R-J) outline of classification was described. I shall cite here relevant passages from three observers to substantiate this.

In his concluding remarks at the Ciba Foundation study group meeting on the "Pathogenesis of Leprosy" held in London in January 1963 to honor the late Prof. Khanolkar, James Doull observed: "The pathologist gets a single biopsy from a selected portion of a patient's body. . . . Of course, what the pathologist should do is to take specimens from many parts of the body. He might be astonished to find, if that were done, that in many cases the picture might vary quite a bit. . . . we think that cases of what one might call dimorphous leprosy are very much more common than was formerly thought. If you take biopsies from several parts of the body, you will sometimes find not only lepromatous structure but also structure indicating the tuberculoid type."

In an International Seminar on Leprosy at Agra in 1967, organized jointly by the Ministry of Health, the Indian Association of Leprologists, and the HKNS to coincide with the inauguration of the JALMA laboratory, Stanley Browne, initiating the discussion of the session on borderline leprosy, observed: "In the individual patient, the histological appearance may vary with time, with treatment, with the lesion, and at different sites and different depths of the same lesion" (Proceedings of the Workshop, Ministry of Health, January 31 to February 2, 1967, p. 55).

Years later, in correspondence to this JOURNAL (IJL 1981:47:64–65), Kundu of the School of Tropical Medicine, Calcutta, commenting on the R-J classification, observed: "To be more explicit borderline lesions of the same patient often present pleomorphic lesions which both clinically and histologically vary from BT, BB, BL type of clinical as well as histopathologic lesions. Even the larger single borderline lesion at times presents a BB lesion at one end and