leprosy would be enormous. They could be reallocated to programs of diagnosis, treatment, follow up, and prevention of cases.

It is time for organizations and societies engaged in aid to leprosy patients to accept and facilitate the implementation of systematic, aggressive and permanent systems for combatting leprosy in its initial stage where we think it is possible to cure, in the decade of the 1990s, every patient, thanks to MDT, and to save that patient from the prejudice and stigma of leprosy in its advanced phase. Leprosy would then truly become a disease "like any other." Above all, the patients would really regain hope and dignity, with an effective and long-lasting cure.

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Modification of Multidrug Treatment of Leprosy in Vanuatu

TO THE EDITOR:

Side effects of leprosy treatment with dapsone are said to be uncommon ([2]), but we recently reported a very high incidence of the dapsone (DDS) or sulfone syndrome in Vanuatu ([4]).

During the years 1988 to 1991, 9 leprosy patients in Vanuatu developed the dapsone syndrome and 4 of them died. During this 4-year period only 37 patients were started on leprosy treatment, an incidence of the dapsone syndrome of 24% with a fatality rate of 11%. All of the patients were given multidrug therapy (MDT) of daily dapsone (100 mg) and clofazimine (50 mg) and monthly rifampin (600 mg) and clofazimine (300 mg).

We have discussed the possible reasons for a high incidence of reactions in Vanuatu ([4]). We thought the apparent increase in the number of dapsone reactions in Vanuatu since MDT was introduced was probably due to the high starting dose of 100 mg of dapsone, possibly enhanced by the combination with clofazimine and rifampin and also due to a genetic susceptibility of Melanesians.

Dapsone reactions are seen fairly frequently in Australian Aborigines (personal communication, Dr. J. C. Hargrave, 1991), and there have been several reports of dapsone reactions from Papua New Guinea (PNG). Two brothers in PNG both developed the dapsone syndrome during leprosy treatment ([1]), and a rash developed in 4.6% of a series of 108 new cases of leprosy treated with dapsone in Port Moresby, PNG ([3]). An increased incidence of dapsone reactions since the introduction of MDT has also been reported in non-Melanesians ([5]).

Because of these frequent reactions, we had proposed to admit all leprosy patients in Vanuatu for the first 2 months of treatment. As a result we thought reactions would be picked up earlier and treatment could then be stopped, hopefully lessening the severity and likelihood of fatal reactions. We had also decided to start dapsone in a dosage of 50 mg daily, and increase the dose after 1 month. It was later decided to stop using dapsone in paucibacillary cases and to substitute daily clofazimine in its place.

However, there has been another death from a dapsone reaction in Vanuatu in a multibacillary leprosy case: A 72-year-old woman was admitted to the Northern District Hospital in Santo on 31 March 1992 with heart failure. She was noted to have facial and ear swelling. Skin smears were positive and on 10 April 1992 she was started on MDT. Unfortunately she was given dapsone in a dose of 100 mg daily. On 14 May 1992 she became feverish and unwell. The family requested her discharge and she went home off all treatment. She was brought back to the hospital on 19 May 1992 deeply jaundiced. Steroids were started but she died 2 days later on 21 May 1992.

Although we had decided to reduce the starting dose of dapsone given in MDT, because of this further fatal reaction the Disease Control Committee of the Department of Health in Vanuatu has recommended that dapsone should no longer be used in Vanuatu. Unfortunately, there is limited experience of the effectiveness of combination MDT regimens not using dapsone ([6]), but after discussion with the regional WHO consultant it has been decided to continue with MDT substituting ethionamide, or if intolerance to ethionamide occurs, minocycline, for dapsone.

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On Reflections on the Elimination of Leprosy

TO THE EDITOR:

In the interesting editorial "Reflections on the Elimination of Leprosy" (IJL 1992: 60:71–80), Fine notes that "the easiest way to reduce the prevalence of cases on treatment is . . . to shorten their course of treatment." If, in Malawi, we stopped the treatment of multibacillary leprosy patients at 24 months, rather than our current practice of treating until the bacterial index of skin smears has become zero, the prevalence rate of leprosy per 10,000 population would have been 1.13 in December 1990 and 0.94 in December 1991. It may, therefore, appear that leprosy has been eliminated by December 1991 as a public health problem within the borders of the Republic of Malawi.

But, as an example of the "number-dancing" in relation to the question, "What population?" as predicted in the editorial, one should realize that among the estimated 1 million Mozambican refugees currently residing in Malawi, the prevalence rate of leprosy (even assuming stopping the treatment of multibacillary patients at 24 doses) is still 2.06 per 10,000. This group of refugees is concentrated mainly in the two most southern districts of Malawi. Surely leprosy has remained a public health problem, at least in some parts of the country or in some subgroups of the population?

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