assessing the impact of MDT. In order to monitor compliance, a record should be kept of the number of patients who drop out of treatment.

A system for evaluation should be developed when the programme is planned. Progress should then be continuously measured in relation to specific targets at different stages of the programme. Periodic evaluation by independent teams should be encouraged.

5.13 **Treatment of patients with human immunodeficiency virus (HIV) infection or tuberculosis**

HIV infection is a significant problem in many countries where leprosy is endemic. As yet, leprosy has not been found to be more common in such countries, but occasionally, patients may be encountered who both are HIV-positive and have active leprosy. The information available (51) indicates that the initial response of such patients to MDT is similar to that of other leprosy patients and treatment of reactions does not require modification.

Patients suffering from both leprosy and tuberculosis will also occasionally be encountered. They will require standard antituberculosis therapy in addition to MDT for their leprosy. At present only rifampicin will be common to the two regimens and it must be given in the doses required for tuberculosis.

6. **Research trends and needs**

6.1 **New bactericidal drugs**

Progress continues in all areas of leprosy research but particularly in chemotherapy. The availability of three powerful new bactericidal drugs has led to considerable work to define their role in the treatment of this disease. Ji et al. recently reported the results of mouse-footpad studies, which showed that a single combined dose of minocycline and clarithromycin is only slightly less bactericidal than rifampicin, while adding a single dose of ofloxacin yields a combination similar to rifampicin in terms of activity. They suggested that this three-drug combination could be given once monthly for treating multibacillary patients infected with rifampicin-resistant *M. leprae*, and that this same combination or perhaps just minocycline plus clarithromycin could be given together with rifampicin once monthly to treat other multibacillary patients (52).

Although there is less need for new drugs now than in 1981, the potential for finding new drugs is greater. This is because thousands of preparations are currently being screened for antituberculosis activity, some of which are likely to be effective against *M. leprae*. Such drugs may permit the duration of therapy to be reduced further. A drug to eliminate persistent *M. leprae* would also be extremely useful.
6.2 **Shorter therapy**

Currently, a regimen consisting of 600 mg of rifampicin plus 400 mg of ofloxacin, both given daily for 1 month, is being evaluated as a treatment for both paucibacillary and multibacillary leprosy. If successful, this would markedly shorten leprosy chemotherapy, although it would still fall considerably short of the theoretical ideal of single-dose treatment for this disease. Supervising daily therapy for 1 month would of course be costly and labour-intensive, and innovative approaches to this limitation of the regimen would have to be sought. Whatever the results of such trials, the quest for ever shorter regimens will undoubtedly continue. The Study Group recommended that attempts should be made to develop very short-course regimens, particularly for early paucibacillary leprosy, which is a significant problem in certain countries.

6.3 **Intermittent supervised therapy**

Monthly supervised therapy, without the need for self-administration of drugs, would eliminate the problems of compliance with the current MDT regimens for multibacillary cases, where only the monthly administration of rifampicin and clofazimine is supervised. Several possible regimens based on supervised intermittent administration of ofloxacin, minocycline, clarithromycin and rifampicin are noted in section 6.1. As noted earlier (see page 9), rifampicin plus clofazimine might be added to that list, at least for paucibacillary disease. However, such regimens are unlikely to have a major impact on leprosy control unless their costs are acceptable and they are significantly shorter than standard MDT.

6.4 **Improved reaction therapy**

The best method of preventing disability is to diagnose leprosy as early as possible using the methods now available, and then provide appropriate treatment, including drugs for the control of reactions and neuritis. Corticosteroids and thalidomide are excellent drugs for these purposes, but may have severe toxic effects. The Study Group therefore recommended that priority should be given to finding an acceptable alternative to these drugs.

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