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Letters to the Editor

COMMENT: BLISTER–CALENDAR PACKS FOR MULTIPLE DRUG THERAPY IN LEPROSY

Sir,

I have read with interest the article 'Further observations on MDT blister–calendar packs in vertical leprosy eradication programmes—a multicentre study (Phase II)' by Revankar *et al. Lep Rev* (1993), **64,** 250–4, in which no significant difference was found in compliance rates for self-administered doses between the 2 groups studied (blister–calendar packs *versus* loose drugs). Their observations prompt me to submit some information from a trial of blister–calendar packs (BCPs) which was set up some years ago in Thailand. Although for various reasons (described below) the trial was terminated without analysis or publication, the attempt was of considerable interest, not only in the context of the historical development of BCPs for leprosy in recent years, but also as an illustration of some of the inherent difficulties which are likely to be encountered in trials of this kind.

In association with colleagues in the Ministry of Public Health in Bangkok, the Medical Department of Ciba-Geigy, Basle, Switzerland, set up a comparative trial in Thailand in 1987 to assess: 1, regularity of attendance for monthly medication; 2, compliance to the ingestion of daily unsupervised medication; 3, the logistics involved in the distribution of anti-leprosy drugs to patients; and 4, attitudes, motivation and performance of patients and staff, with particular regard to the dispensing of antileprosy drugs. Emphasis was given to the use of both vertical (specialized) and horizontal (integrated) programmes in the belief (at that time) that the most useful long-term application of BCPs might be in integrated programmes, using the primary health care approach, with supervision at district level, when prevalence rates had fallen to low levels. Multibacillary patients, either new or under treatment, were included, with a proposed total intake of 480, subdivided into 4 groups of 120 (BCP and loose drug groups in both vertical and horizontal programmes). The area chosen was situated in the north-eastern part of Thailand, extending towards the border with Laos. Each case was to be followed in the trial for a period of 6 months and apart from routine clinical and administrative details, records were to be kept of attendance rates and compliance, the latter based on dapsone–creatinine tests of the urine for the presence of (self-administered) dapsone. A questionnaire was included to record 'soft' data on motivation and attitude of patients and staff to treatment, notably with regard to the use of BCPs versus loose drugs. Preliminary descriptions of the techniques used in assessment[1] and the methodology of the trial[2] were given at the 13th International Leprosy Congress in the Hague in 1988.

Despite a reasonably good intake of patients, with satisfactory participation and completion by the majority, numerous problems arose with regard to the final collection, analysis and interpretation of data from the field, which eventually proved insurmountable. These were partly related to protracted difficulties with the analysis of the urine specimens for the dapsone : creatinine ratio, but also to problems of communication with the trial 'managers' in Oxford, Basle, Bangkok and the field areas. In 1990, it was reluctantly concluded that no further

progress could be made and the trial was therefore closed. In retrospect, it is in fact doubtful if the data collected would have been adequate to demonstrate a statistically significant difference between results in vertical (specialized) and horizontal (integrated) programmes, and it is also clear that the 'soft' data on attitudes and motivation would have been extremely difficult to analyse in objective terms. Furthermore, the overall value of the trial was considerably weakened, even before it got under way, by: 1, rapidly mounting evidence that many national and international agencies working in leprosy had already decided to use BCPs, in some cases on quite a large scale; and 2, numerous reports from WHO and other agencies of high levels of attendance and compliance to prescribed medication, using loose drugs for multiple drug therapy, in routine control programmes in different parts of the world.

In the years since the publication of the first designs and recommendations for the use of BCPs in leprosy by Winsley *et al.*[3] it has become increasingly clear that they are unlikely, in most circumstances, to improve attendance and/or compliance figures above those which are frequently achieved using loose drugs. As indicated by Revankar *et al.* in the article referred to in Ref. 3, and in a detailed editorial account of the development and potential of BCPs in leprosy,[4] other operational benefits may be of much greater importance. Their wider use in leprosy has, almost certainly, been impeded by the element of higher cost, compared with loose drugs. However, there have also been remarkable (and in some ways inexplicable) contrasts between agencies and control programmes which have accepted and used BCPs extensively (for example the Philippines and the DANIDA-supported districts in India), as having obvious advantages, without the need for formal trial or assessment, whilst others have been slow to see operational benefits or cost-effectiveness.

As far as India is concerned, the issue may now be resolved, for it has recently been reported that BCPs will be used for all the remaining districts in need of MDT in the National Leprosy Eradication Programme, with support from the World Bank. As this involves 143 districts with over 1·5 million cases in the next 5 years, inclusive of new cases likely to arise,[5] this clearly represents a very high level of interest and confidence in the use of BCPs for this purpose. In addition to the information which is already available from the use of BCPs over a period of many years by the DANIDA-Assisted National Leprosy Control Programme, the opportunities to further assess the value of BCPs in leprosy (and their potential for other diseases, notably tuberculosis) are likely to be immense.

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