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Letters to the Editor

REPLY: SLIT-SKIN SMEARS FROM THE FINGERS IN LEPROSY

Sir,

I must take issue with Dr Macrery when he states in his letter (*Lepr Rev* 1988; **59:** 360) that his experience with finger smears on multibacillary patients in Malaŵi is, 'clearly at variance with those already reported in the literature', for his report is on 'multibacillary patients on active antileprosy chemotherapy as well as any new ones who presented themselves'. The fact is that there have not been any previous reports on such patients, for these have been on new lepromatous patients,[1] on lepromatous patients long-treated with dapsone,[2-4] and on multibacillary patients on long-term follow-up after MDT.[5] Therefore his findings are not at variance with those of others. I suggest that the explanation lies in the fact that all published papers, with one exception, have been on lepromatous (not multibacillary) patients, the one exception being my paper from Malta which reported a long-term follow-up study.

Dr Macrery has performed a useful task in showing that in Malaŵi there is no point in including finger smears when assessing patients for MDT, and I do not doubt that the same will apply in other regions of the world. However, if he is interested in the possibility of finding solid-staining bacilli ('persisters') in the follow-up of his lepromatous patients, he will be well advised to include smears from fingers.

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REPLY: SLIT-SKIN SMEARS FROM THE FINGERS IN LEPROSY

Sir,

I read with interest the letter, by R T Macrery (*Lepr Rev* 1988; **59:** 360–1). Skin smears have always been a subject of interest for leprosy workers. However its practical implementation is not universally identical, hence different documentation on this subject is equally contradictory.[1,2] These differences can be attributed to the manual variations in performing the smear test. The role of geographical variance[3] is debatable yet could be a subject for further study.

It was difficult to understand in this letter the role of the finger smear, as the data presented are

not classified according to the type of leprosy, and a separate analysis of follow-up smears of patients under treatment is not available. In our opinion the role of finger smears in suspected new patients and in clinically doubtful cases is controversial. In contrast, finding the finger as a sole positive site in long-treated inactive/released multibacillary leprosy patients may be of much importance and is significant. This can be a warning indication of relapse.[1,4]

I take this opportunity to present our observations regarding finger smears. In 1982–3 we, in Alert, India (Association for Leprosy Education, Rehabilitation and Treatment, India, Bombay) used to take smears from the finger (right middle finger—middle phalange) as one of the four routine sites, right earlobe, left forehead and an active skin lesion being the other three. We took this chance to analyse the available data to observe the bacterial trend in fingers in comparison with earlobes, which are incidentally the universal routine site. Since this was the beginning of the project our analysis was restricted to a few patients. Nevertheless, the findings were not disappointing and the following are excerpts from them.[5]

We studied available data in three groups. The first being the group of 39 untreated lepromatous (L) and borderline (BL) leprosy patients. The second consisted of 22 L and BL cases treated for 5 years or more. Bacteriological follow-up of patients treated with multi drug therapy (MDT) having a minimum Bacteriological Index (BI) of 2, formed the third group. The interval between initial and follow-up smears was 12 months (± 2).

In the first group we observed that, in untreated L patients the mean BI of ears and fingers was 3·8 and 3·7, respectively. The BI of these sites was more than the average bacteriological index (ABI) in 47·4% and 52·6% of cases, respectively. Similarly an equal number of patients showed the highest BI among routine sites, i.e. 21%. Unlike L, untreated BL patients showed different trends in finger bacteriology. The mean BI being 2·8 and 2·3, while BI more than ABI was seen in 50% and 45% of cases in ears and fingers respectively. However only 5% showed a higher BI in fingers against 35% in ears. Interestingly, 71·4% patients showed a higher BI than ABI in forehead smears (second routine site). We attribute this difference to the fact that ears and faces are clinically more affected than fingers in BL, unlike L-type, where generalization of the disease is characteristic.

Similar phenomenon was seen in the group of patients treated for 5 years and above. Mean BI of ears and fingers was 2·8 and 2·5 in L, and 1·4 and 1·0 in BL. BI was noticeably higher than ABI in 46·6% and 40·0% in L and 71·4% and 28·6% in BL leprosy in ear and finger sites respectively. Once again in treated BL patients the highest number of cases (83·3%) showed a BI higher than ABI in forehead sites with the highest mean BI 1·6 in this group.

It was noticed that in group three, fingers were showing a bacterial swing more or less similar to that of ears. When compared with the fall in ABI, 14 and 15 of 26 patients showed decrease in BI in ear and finger smears, respectively, while 7 cases had static BI at both the sites. Similarly when the ABI was static in six of 26 cases, BI of ear and finger smears was also unchanged in two of them.

We feel our findings, though based on few patients, are not discouraging. Moreover, we could draw the conclusion that the finger is also as informative as the ear, which is the universally accepted routine site. Its role as the early site for bacterial relapse[1,3] probably contributes to this. However, we experienced some practical limitations while collecting smears from finger sites: it is not always possible to pinch enough to collect sufficient tissue pulp; bleeding is often excessive and difficult to control, hence blood-free smears are unusual; and the finger is a most painful site and therefore disliked by patients. Yet, we had results of finger smears similar to that of other routine sites. As its inclusion in the routine sites is somewhat impracticable, we strongly believe that it should be considered at the time of declaring patients inactive/cured. The additional knowledge about the bacterial status of the finger at this crucial time might prove valuable.

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Sir,

When I read the initial report of the higher frequency of positivity and the higher Morphological Index (MI) of smears taken from fingers, I tried to confirm this in my programme in Northern Nigeria but could not. I found the most highly positive sites were invariably the ear and brow. It was true that most patients with a highly positive (5+ to 6+) smear were also positive from a finger, and that the MI tended to be higher from fingers than smears taken elsewhere.

It would be interesting to determine what may be the reason for this difference, but apparently, according to this letter from Malaŵi, it is true for at least a wider geographic area of Africa. It would be worthwhile investigating this matter further. Is it a geographic, climatic, or racial difference? Or is there possibly some other factor producing this variance?

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