SLIT-SKIN SMEARS FROM THE FINGERS IN LEPROSY

Sir,

In previously published studies[1–4] attention has been drawn to the interesting and unexpected finding of positive slit-skin smears in the fingers of leprosy patients. In view of this we decided to investigate the value of including this site in a study of 278 smears taken from 220 patients in the LEPRA Control Project, based in Lilongwe, Malawi, Central Africa, during the period July 1986 to May 1987.

Our trained leprosy control assistants were instructed to take a slit-skin smear from the finger of all multibacillary patients on active antileprosy chemotherapy as well as any new ones who presented themselves during the course of the study. The finger site was to be included as an extra site whenever a smear was being taken. We routinely take slit-skin smears from multibacillary patients approximately every 6 months. Our routine sites are both earlobes plus at least 2 other sites corresponding with active or old, previously smear-positive, skin lesions.

We chose the dorsum of the proximal phalanx of the 3rd digit (middle finger) of the left hand. The skin is loose enough to pinch and smear properly. The site bleeds easily after releasing the skin, but the bleeding is also easily stopped. We had no reported complications of any kind.

As can be seen from the Tables 1 and 2, the finger site was mostly not useful. In only 3·2% (9/278) of the smears was the Bacteriological Index (BI) of the finger site higher than any of the routine sites. In 71·2% (198/278) of the smears the BI of the finger site was actually the lowest or equal to the lowest routine site. Furthermore, the average BI of the finger sites was much lower than the average BI of the highest routine sites and in fact compared almost equally to the average BI of the lowest routine sites.

The value of the finger smear might have been twofold: 1, in a suspected new patient a positive finger smear in the absence of any other positive site would certainly influence the treatment to be given and maybe even clinch the diagnosis in an otherwise clinically doubtful case. This did not occur in our study which included 32 new multibacillary patients; 2, in a multibacillary patient on antileprosy chemotherapy a positive finger site in the absence of other positive sites would influence

Table 1. The BI of the finger site compared to the BI of the highest routine site (earlobe or lesion) from 278 smears taken from 220 patients

BI finger site \ BI highest routine site	0	1	2	3	4	5	6
0		22	39	22	5	5	1
1	2	4	16	9	7	6	3
2	1		11	12	14	8	2
3	1		3	12	23	10	9
4					5	5	10
5					1	4	4
6						1	1

Notes: 1 Average BI of finger site: 1·63.
2 Average BI of highest routine site: 3·32.
3 Finger site is highest: 9/278 = 3·2%.
4 Finger site is the only positive site: 4/278 = 1·4%.

Table 2. The BI of the finger site compared to the BI of the lowest routine site (earlobe or lesion) from 278 smears taken from 220 patients

BI finger site	BI lowest routine site 0	1	2	3	4	5	6
0	63	16	10	5			
1	10	15	13	5	4		
2	13	5	19	9	2		
3	3	6	23	17	8	1	
4	1		2	8	6	2	1
5			1	3	3	2	
6				1		1	

Notes: 1 Average BI of finger site: 1·63.
2 Average BI of lowest routine site: 1·62.
3 Finger site is lowest: 76/278 = 27·3%.
4 Finger site equals lower routine site: 122/278 = 43·9%.

the length of treatment before discharge. This indeed occurred in 4 of our patients as can be seen in Table 1. In these 4 patients the treatment was extended because of their positive finger sites. All 4 subsequently produced a BI of zero at their finger sites and were then discharged from treatment. (Our current policy is to treat until smear negative.) All 4 patients had their treatment extended by about 1 year.

Because of the very small percentage of finger smears which would influence a clinical decision we have in our project decided not to use the finger site routinely.

These observations from Malawi are clearly at variance with those already reported in the literature. Furthermore, Jopling has recently confirmed the value of examining the fingers in a report of his investigations of the Malta Leprosy Eradication Project.[5] We consider that our selection of patients and laboratory techniques were comparable to those of the other investigators, and we are at a loss to explain the markedly different results obtained. It would be of interest to learn of the experience of clinicians from other parts of the world.

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References

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