

Mycobacteria Lepræ in the Thick Blood Films of Leprous Patients

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RECENTLY two papers (Ref. 1 and 2) have appeared reporting the finding of lepra bacilli in thick blood films, in a very high percentage of cases, even in the neural type of leprosy. This finding was interpreted as indicating that bacilli could frequently be detected free in the circulating blood of patients with leprosy even in a very mild form.

At the suggestion of Dr. Robert G. Cochrane, of the British Empire Leprosy Relief Association, London, who is now touring in India, I was prompted to do a thick blood film of all the patients here and to examine the slides for *M. lepræ*. The results of the 400 patients thus examined and their classification are given below in a tabular form.

Technique.—A thick blood film is taken from the back of the thumb, just above the root of the nail, of every patient, according to the thick blood method for malaria as recommended by Knowles and Das-Gupta. After the film is thoroughly dried a few drops of distilled water are dropped on the film and left for about ten minutes. The distilled water is then tilted off the film which is then stained by Ziehl-Neelsen's Method.

Classification ...	N ₁	N ₂ N ₁	N ₂	N ₃ N ₂	N ₃	N ₁ C ₁	N ₂ C ₁	N ₂ C ₂	C ₁	C ₂ C ₁		C ₃ C ₂	C ₃
No. of patients examined under each item ...	65	22	16	6	2	1	27	5	61	26	87	32	50
No. of positive findings under each item by Thick Blood Film Method ...	...	...	...	...	...	...	...	...	2	4	21	20	47

It will be seen from the tabulated results that not a single case of neural leprosy showed any *M. lepræ* in thick film. Only six positive slides were seen out of 87 early cutaneous cases. Out of 169 C₂ and C₃ cases examined, 88 showed positive results. To have a check we selected a few cases who showed many groups of *M. lepræ* in the film, and about 5 c.c. of blood was taken direct from the vein, and after taking off the needle and ejecting some of the blood, the last drop in the syringe is made into a thick film and

stained and examined for *M. leprae*. We did not find any *M. leprae* except in two C₃ cases who were having skin reaction at the time of taking the blood. We believe that in most cases in which we found bacilli in the thick blood film, the bacilli came not from the blood but from the skin at the site of puncture. Lowe and Christian (3) working on the "Clip" and "Slit" methods found that out of 160 patients, 110 showed positive results by the slit methods whereas by the clip method 128 showed positive results. When the slit method sometimes failed to show *M. leprae* in otherwise positive cases, the thick blood film method cannot be relied upon as a routine method of bacteriological examination in leprosy.

Mycobacterium leprae is rarely found in the blood stream. It needs patient searching to get positive results in the thick blood film of even a C₃ case, whereas by skin examination we can find *M. leprae* in large numbers in the very first field in most cases. Hence skin examination is much more easy and accurate.

REFERENCES.

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- (3) Lowe (J) and Christian (E. B.).—1932. "The Indian Journal of Medical Research," Vol. XIX, No. 3, Jan., p. 867.