CORRESPONDENCE

This department is for the publication of informal communications that are of interest because they are informative and stimulating, and for the discussion of controversial matters. The mandate of this JOURNAL is to disseminate information relating to leprosy in particular and also other mycobacterial diseases. Dissident comment or interpretation on published research is of course valid, but personality attacks on individuals would seem unnecessary. Political comments, valid or not, also are unwelcome. They might result in interference with the distribution of the JOURNAL and thus interfere with its prime purpose.

Polymerase Chain Reaction Applied to Biopsies from Paucibacillary Leprosy

TO THE EDITOR:

In a previous study ([2]), we applied the polymerase chain reaction (PCR) to mouse foot pad harvests and human skin biopsies from multibacillary (MB) patients. One of the practical applications of the PCR could be the documentation of paucibacillary (PB) leprosy, which is the subject of the present study.

MATERIALS AND METHODS

Ten 5-mm punch skin biopsies were taken from 10 different patients with the clinical diagnosis of paucibacillary (9 cases) or indeterminate leprosy (1 case) at the Institut Marchoux, Bamako, Mali. The biopsies were divided longitudinally into halves; one was fixed in 10% Formalin for histologic diagnosis, the other was placed in a dry container on ice. The two series of biopsies were sent by air to the Leprosy Laboratory of the Institute for Tropical Medicine, Antwerp, Belgium, where they arrived 48 hr later.

The fresh biopsies were weighed, minced with HCl-cleaned sterilized scissors, suspended in 0.5-ml distilled water, and stored at 20°C until PCR processing. The Formalin-fixed specimens were embedded in paraffin, and the sections were stained with the Triff technique ([1]).

The sample preparation for the PCR consisted of five cycles of freeze-thawing; the PCR was performed as described previously ([2]). The reaction was done simultaneously in duplicate on each suspension: one tube with, and a second tube without, an internal control. Furthermore, between each couple of tubes a blank containing distilled water instead of a biopsy suspension was introduced as the internal control. This tube was subjected to exactly the same manipulations as were the biopsies. When PCR inhibitors were detected in the tube containing the internal control, the reaction was repeated with a 1/10 dilution of the sample.

RESULTS AND DISCUSSION

On histopathological examination, two cases were diagnosed as tuberculoid (TT) and seven as borderline tuberculoid (BT) leprosy. In the possible indeterminate case clinically only some perivascular lymphocytic infiltration was seen, and no definite diagnosis of leprosy could be made. Acid-fast bacilli were not found in any of three sections of each case.

As shown in The Table, 3 specimens produced a positive result, 1 was negative and inhibitors were present in 6. When the latter was diluted 10^{-1}, one specimen still contained inhibitors while the five others gave a negative reaction.

It is striking that, with the exception of biopsy number 1, 2 of the 3 positive results were obtained among the three heaviest biopsies. It seems that a positive result can only exceptionally be obtained in biopsies weighing 30 mg or less.

These results confirm our earlier predictions based on the PCR results from MB leprosy biopsies ([2]), that the technique as presently performed can only detect *My-*

THE TABLE. *Results of PCR reactions on PB specimens.*

No.	Histo-logical diagnosis	Weight (mg)	Undi-luted sus-pension	Sus-pension diluted 1/10
1	TT	40.6	I[a]	–
2	BT	37.4	+	
3	BT	34.6	+	
4	BT	32.2	I	–
5	PI[b]	26.7	I	–
6	BT	20.4	I	–
7	BT	13.6	–	
8	TT	12.3	I	–
9	BT	9.1	I	I
10	BT	8.5	+	

[a] I = Inhibitors.
[b] PI = Perivascular infiltration; no definite sign of leprosy.

cobacterium leprae DNA in some PB cases, probably those containing the higher number of *M. leprae* still compatible with PB leprosy.

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2. PATTYN, S. R., URSI, D., IEVEN, M. and RAES, V. Polymerase chain reaction, amplifying the DNA coding for species-specific rRNA of *Mycobacterium leprae.* Int. J. Lepr. **60** (1992) 234–243.

Unusual Cell of Leprous Neuritis

TO THE EDITOR:

For the past two decades we have been studying leprous nerve lesions from various angles, and the use of electron microscopy has proved particularly useful in defining some of the early as well as aberrent pathology ([4, 5]). In this spectral disease the exact identification of a battery of infiltrating lymphoid and phagocytic cells, seen in different stages of development, is very difficult at the fine structural level. However, every cell is an entity by itself with a morphological feature of its own, and it is here that electron microscopy helps in elucidating the details.

In this short communication we wish to report on the presence of an unusual cell type frequently seen in active and chronic nerve lesions obtained from both treated and untreated cases of borderline (BB) to lepromatous (LL) leprosy ([3]) and as yet unreported.

The cells in question were seen within the endoneurium, were strikingly rich in rough endoplasmic reticulum (RER), and were seen in close association with small groups of axons and Schwann cells. Moreover, these cells were seen with an even or sometimes irregular coating of basal lamina around them. The stacking of RER and the nuclear appearance of some of the cells resembled that of a plasma cell (Fig. 1). We have not seen any presence of *M. leprae* in these unusual cells, but a bacterial presence was seen in the Schwann cell processes lying in close association with them.

The frequency with which these cells were seen in several of the nerve lesions, to our mind, does not appear to be a chance finding. However, the origin and function of these cells is debatable. They could be either transformed Schwann cells or migratory cells that have invaded the basal laminal tube of the Schwann cells. That Schwann cells are known to synthesize and to secrete collagen