

Leprosy; Another Possible Source of Transmission

TO THE EDITOR:

Armadillos, sooty mangabey monkeys, chimpanzees and other primates have been examined by various workers at various times using clinical and experimental methods (1, 4, 11-13) for affliction with leprosy and for their possible role in transmission. According to Meyers, *et al.* (?), “. . . there seems ample justification for undertaking, forthwith, carefully designed surveys for enzootic leprosy in some of the major endemic areas.” These authors suggest that such surveys should be initiated in the natural habitats of the mangabey monkey and the chim-

panzees in West Africa. As a means of understanding the behavior of *Mycobacterium leprae*, this is an excellent suggestion. However, any hypothesis regarding transmission of leprosy from nonhumans to humans must, of necessity, take into consideration a “most common factor” which should be consistent with regard to time and place. For example, sooty mangabey monkeys, chimpanzees, and armadillos simply do not exist in some of the most endemic areas of leprosy today. They could not have figured in the transmission in Norway before it disappeared completely, after making

a brief comeback in the early part of this century.

To explain the occurrence of leprosy worldwide, a more universal hypothesis based on a "most common factor" needs to be made. This hypothesis should take into account, for example, the Norwegian experience, the incidence of indigenous leprosy in the southern states of the United States of America, the lack of an appreciable drop in annual incidence figures in well-organized, MDT-based, control programs in places such as Karigiri, India, and the incidence of leprosy in China, Africa and the Far East.

One such hypothesis based on a "most common factor" is that *M. leprae* may be spread through bovine milk. Bovine milk is and has been a universal phenomenon in Africa, Asia, Norway, the southern United States and, indeed, anywhere in the world. Milk processing, consumption habits, and customs, however, vary from region to region and from home to home. In parts of India, for example, a common belief is that boiling of milk destroys its nutritive value, and so it is consumed raw.

Armadillo and human milk samples have yielded *M. leprae* (^{7,9}). Mycobacteria have been isolated from pasteurized milk (³) and from raw milk (⁵). These studies used culture techniques to characterize and classify these organisms. *M. leprae* that may have been present would have been excluded automatically by virtue of its noncultivability. No studies confirming or negating the presence of *M. leprae* in milk have been reported so far, possibly because conventional techniques used for the identification of *M. leprae* have required large numbers of viable organisms.

The advent of the polymerase chain reaction (PCR) technique, in 1984, represents a quantum leap in our ability to detect small amounts of *M. leprae* with great certainty (^{2, 6, 8, 10}). An attempt to exclude *M. leprae* from among the acid-fast organisms found in milk, using PCR, could well prove to be an interesting exercise.

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