
REFLECTIONS ON THE FIRST INTERNATIONAL
CONGRESS OF LEPROSY

To the Cairo Congress there came from all quarters an imposing mass of most interesting documents, from among which leprologists will be able to glean valuable information. Some of these reports were sent, but most of them were brought by scientists from every part of the globe, who knew each other by their work but who, for the most part, had never met. This reunion afforded them an opportunity to see and appreciate each other, and to exchange ideas. It must be agreed that it was a fine assembly of great physicians and of eminent hygienists who had all exerted most loyal efforts in the fight against leprosy; there were learned anatomopathologists who had devoted patient study to efforts to classify the different forms of the disease; and there were excellent research workers who had endeavored by the most painstaking and ingenious methods to cultivate the Hansen bacillus or to find a receptive animal for this disease.

I regret only that there was no committee to develop the experimental side of leprosy, which is still very much neglected. The clinicians seem to be unduly inclined to believe that experimentation is reserved for a special class of workers, whereas they themselves are better situated than anyone else to experiment and to apply their diagnostic knowledge. I therefore consider it a duty to put forward here certain thoughts that have been suggested to me by long studies, unfortunately paralyzed for want of the material that is possessed so abundantly by physicians in leprosy countries.

1. By chance I once encountered a case of leprosy with peculiar clinical manifestations, with material from which I was able

to infect five out of six rats inoculated, the sixth having early succumbed to an intercurrent infection. The morphology of the germs which multiply in our rats differed from both the Hansen and the Stefansky bacilli, though they more nearly resembled the latter in the way they were distributed in the cytoplasm of the host's cells. After the second passage from rat to rat it was no longer possible to distinguish this germ from that of rat leprosy. We inferred from this that there might exist, in leprosy as in tuberculosis, several bacterial species adapted ordinarily to one type of animal, but capable according to circumstances and also according to a special disposition of the patient to develop in man.

This experience was never repeated. No doubt cases of leprosy identical with the one I found are rare. Hitherto, research workers have limited themselves to inoculating a few rats with infectious material from one or two patients. It is important to solve this question of the unity or the plurality of specific leprosy germs. It is with this object in view that I propose to our colleagues who have many cases at their disposal, that they do not content themselves with experimenting in this way with material from a few cases, but that they do it from a large number of patients. It would be advisable to inoculate germs obtained from finely ground lepromatous material, either to series each consisting of 10 rats,¹ or, if a large quantity of animals is not available, to a few series of ten rats, each animal of which would receive several inoculations of material from different patients. The important thing is not so much to find out if such and such a patient has an inoculable bacillus as to determine if there are several bacillary strains that are pathogenic for man and capable of producing lesions similar to those caused by the Hansen bacillus.

2. One of the greatest obstacles encountered by workers anxious to obtain cultures *in vitro* of the Hansen bacillus is the lack of an animal which is receptive to this disease. While waiting for a confirmation of Prof. Adler's attempt, it would be a great service to science if another receptive animal could be discovered besides the Syrian hamster. Therefore, leprologists should inoculate all the animals in their vicinity, wild or domestic. Perchance some day one will be found in which the bacillus will multiply.

3. We know that in many resistant people the tubercle bacillus remains latent in a lymph node and that its presence is only

¹This number is specified because the animals must be kept for a long time and a certain number of them may die in the course of the experiments.

disclosed by a microscopic examination at autopsy. We know also that in leprosy the Hansen bacillus can be found in lymph nodes even when there are no skin lesions. At my suggestion my pupils Leboeuf, Javelly, Sorel and Couvy looked for the bacilli in the lymphatic organs, and by puncture they found it in persons who were living in contact with lepers but who had no external signs of the disease. These punctures were performed in the same way as in searching for trypanosoma of sleeping sickness, by holding the selected node between the thumb and first finger and kneading it gently after having introduced a rather thick needle separated from the syringe. A small quantity of pulp comes up in the needle. After having withdrawn the instrument one blows this pulp onto a slide with a dry syringe. In Brazil this method was adopted by Ernani Agricola, Paez Azevedo, Ed. Rabello and others, and it has been included among those employed in finding cases of leprosy.

It being an established fact that the Hansen bacillus can be identified in the superficial lymph nodes of apparently uninfected persons, it remains to be found what becomes of the infection in these cases—if leprosy develops through a progressive evolution or if, on the contrary, the infection sometimes or always remains confined, the bacilli remaining inactive, as in tuberculosis. This can be ascertained only by leprologists who observe their patients for years, or by those who, by keeping records of the results of their examinations, will enable their successors to find out what finally becomes of an infection verified by a puncture.

Here are three of the questions that I would take the liberty of asking our fellow-physicians, hoping that at our next meeting—in Paris in 1943—some answers will be brought forth, and that a research committee will be formed to consider any other points which might be submitted for investigation by leprologists.

Summary.—It is suggested: (1) That infectious material from the greatest possible number of lepers be inoculated into rats to determine if different germs can cause leprosy. (2) That the Hansen bacillus be inoculated in all the animals existing in the vicinity of the investigator, for the purpose of discovering a receptive one. (3) That leprologists find out what becomes of the bacillus found in the superficial lymphatic ganglia of apparently uninfected persons.

—E. MARCHOUX