

BOOK REVIEW

✓ **La Lèpre.** By R. CHAUSSINAND, *Chef du Service de la Lèpre à l'Institut Pasteur*. Preface by Noël Bernard, *Sous-Directeur de l'Institut Pasteur*. L'Expansion Scientifique Française, 1950. Pp. 212, with 75 figures; paper (price not stated).

This small monograph, clearly written, printed on glossy paper, well illustrated in black and white and carefully indexed, reviews in brief space the history, etiology, clinical characteristics, diagnosis, prevention and treatment of leprosy. Mention is made of attempts to cultivate the bacillus, to transmit the disease, and of similar diseases in lower animals. Technical directions for certain procedures are given in an appendix, and a selected bibliography is included.

In discussing the prevalence of the disease in ancient times and its decline in Europe, opinions are cited as to the value of segregation. Associated with segregation there has been a decrease in Norway, but not in the Philippines; furthermore, the disease failed to spread in Minnesota without segregation. The author holds that the disease declined in Europe because of an increase of tuberculosis and of an antagonism between the two diseases [see *THE JOURNAL* 16 (1948) 431-438].

Attempts to cultivate *M. leprae* and to transmit the disease are passed over rather summarily. In more than 1,000 attempts made on 120 culture media with material from 143 patients, the author obtained a single cultivation on a medium having as its base macerated human tissue from muscles and liver. This culture proved nontransplantable.

In the discussion of etiology, heredity is considered to be possibly a minor factor in transmission, the occasional finding of Hansen's bacillus in the placenta and cord blood being mentioned; a distinction between true heredity and congenital transmission is not made. The disease is regarded as contagious because of instances of accidental or intentional inoculation, infection of persons from nonleprous countries when exposed in an endemic area, propagation of the disease in nonendemic countries by returning patients, and occasional epidemic extension, the experience of Nauru being cited. No mention is made of the extensive studies which have demonstrated the relatively high risk of attack of household associates of patients with the lepromatous form of the disease. The skin is favored as the usual portal of entry because of accidental infections, transmission by arm to arm vaccination, and the claim that the first lesion in the great majority of cases is found on uncovered parts of the body. Regarding the usual sex prevalence the author concludes, on theoretical grounds, that males are more often affected because they are both more exposed and more susceptible. The fact that most infections occur in early childhood, when differences in exposure of the sexes are minimal, is not discussed.

The theory of antagonism between leprosy and tuberculosis appears again in the section on immunity. In the opinion of the reviewer there are as yet insufficient facts to support this theory. Its basic assumptions are that allergy and resistance are more or less equivalent, and that allergy to the products of the leprosy bacillus is commonly produced in nature by infection with the tubercle bacillus. Furthermore, adequate statistical evidence that persons reacting positively to lepromin are more resistant

than others under equal conditions of exposure is lacking. Finally, the very high positive correlation between results of tuberculin and Mitsuda tests in the same individuals, found by the author in Saigon and Paris, is exceptional. That there is some degree of cross-sensitization to products of *M. leprae* and *M. tuberculosis* is doubtless true, and is supported by the experimental work of the author.

The premise that the bacillus enters through the skin leads logically to the author's acceptance of a "*lésion primaire d'inoculation*." No new evidence is introduced. The cases in two United States marines attributed to infection by tattooing are regarded as genuine examples of inoculation through the skin, although the reviewer holds that other explanations are equally plausible. Difficult to accept is the extension of the idea of an initial lesion to include instances where no cutaneous signs are evident: "*Mais, cette lésion primaire ne consiste pas toujours en une altération visible du tégument. La lèpre peut aussi debiter par des troubles limités de la sensibilité cutanée sans entraîner une modification apparente de la peau.*"

On the subject of classification, the author has modified the scheme which he presented at the Havana Congress (THE JOURNAL 16 (1948) 258). His classification is primarily clinical, cases being divided into benign and malignant types. Tuberculoid leprosy (included under the heading "*lèpre bénigne*") is subclassified into minor and major. Borderline leprosy (Wade) is regarded as an evolutionary stage of major tuberculoid leprosy. The "indeterminate" form of the South American classification (also included under *lèpre bénigne*) is regarded as very unstable, with a tendency to become tuberculoid or more often lepromatous. Lepromatous leprosy (*lèpre maligne*) is regarded as usually secondary to the tuberculoid or the indeterminate form. Further details need not be gone into here.

In the section on prophylaxis, a plea is made for abandonment of strict isolation, which is inhumane and not effective. Control measures should not be more restrictive in leprosy than in tuberculosis, because leprosy is "*certainement moins contagieuse et moins dangereuse au point de vue social que la tuberculose.*" For countries in which the disease is indigenous, there are recommended: instruction of physicians, free drugs for all patients, treatment of infectious patients in special dispensaries and of noninfectious ones in polyclinics, hospitalization of infectious patients who are a danger to the public, separation of noninfected children from infectious parents, and various types of social assistance to patients and their families. The second section of the chapter on prophylaxis relates to immunization by vaccination with BCG and is taken largely from a previous article by the author (THE JOURNAL 16 (1948) 431-438).

In the chapter on treatment it is stated that, in the author's experience, penicillin and streptomycin have no appreciable effect. Two drugs are regarded as having been shown to be really effective: chaulmoogra and the sulfones. A series of before and after photographs shows beneficial changes following treatment with each. Following Rogers, and purely on theoretical grounds, combined chaulmoogra-sulfone therapy is advocated as probably more effective than either agent singly.

Dr. Chaussinand has put into this book the essence of his long experience in the clinic and the laboratory. The reviewer, while taking exception here and there, has found it instructive and stimulating and feels that it will prove so to others.

—JAMES A. DOULL

Happy Toil. Fifty-five years of Tropical Medicine. By MAJOR-GENERAL SIR LEONARD ROGERS, K. C. S. I., Kt., C. I. E., LL. D. (Glasgow and St. Andrews), M. D. (etc.). Foreword by Major-General Sir John D. Megaw, K. C. I. E. London: Frederick Muller Ltd., 1950. Pp. xvi + 271, with 8 pages of illustrations and 20 text-figures; cloth; 18s net.

"Happy Toil" is the story of a very busy life in which Sir Leonard Rogers tells the fascinating story of his researches on amebic dysentery, kala-azar, cholera, typhoid, snake venom and other things, and of his successful efforts after years of hard toil to found the Calcutta School of Tropical Medicine. In one review seen it is said that the book can best be described as a personal history of tropical medicine, egocentric as autobiographies must be but nevertheless very interesting and relating the author's doings and accomplishments in a reasonably reserved fashion.

Rogers' interest in leprosy started while he was still a house physician in London in 1891. After reaching India he made unsuccessful attempts to cure it with tuberculin and Deycke's vaccine, but in 1912 he became interested in the use of chaulmoogra oil, which had long been valued by Indians. His first patient was a fellow Indian Medical Service officer to whom he gave large doses of gynocardic acid by mouth. The results were surprisingly good, but the gastric discomfort caused by the acid made Rogers look for a more suitable preparation for injection. For three years his efforts proved abortive but in 1915, stimulated by a visit by Victor Heiser, he renewed his efforts and soon began to use a preparation called sodium gynocardate. Sodium morrhuate and sodium soyate were also tried out, but they proved to be less effective. Later on he began to use the ethyl esters of hydnocarpus oil with very good results.

In 1921 Rogers reached the retirement age of 55 and returned to England, but left the leprosy research he had started in the capable hands of Muir. In London he devoted much of his time to a comprehensive study of the literature of leprosy, and in 1925 published with Muir the first edition of their book entitled "Leprosy." His studies led Rogers to believe that only the lepromatous cases of leprosy should be isolated and neural cases should be allowed to mix freely with others as being practically noninfective [a practice long since in effect in the Philippines], and he urged these views on the government of South Africa and others. He believed that if this policy were adopted the leprosy problem would be largely solved in ten years, although he realized that a great deal of propaganda would be needed. As a result of his efforts, the British Empire Leprosy Relief Association was founded in 1923.

In the 1940 edition of the book written with Muir, Rogers summed up the results of fifteen years of the hynocarpus oil treatment. He claimed that of 6,750 known cases treated, 68 per cent had been discharged as cured. He still holds that hydnocarpus oil has a definite place in the treatment of leprosy, in spite of the results claimed for the sulfones. He urges that the two should be combined in the treatment of all cases because their actions are complementary one to the other.

Thirty years have now passed since Rogers first sought a cure for leprosy. Whatever may be the final verdict on the hydnocarpus oil treatment, sufferers from leprosy all over the world owe a deep debt of gratitude

to Rogers, not only for his researches but also for his enthusiastic support of their cause and for stirring up of a world-wide interest in leprosy.

—G. O. TEICHMANN

- ① **Reforma de la Profilaxis de la Lepra en Colombia.** By DARIO MALDONADO ROMERO, *Jefe de la División de Lepra, Ministerio de Higiene, República de Colombia.* Bogotá: Talleres Editoriales de Librería Voluntad, 1949. Pp. 91, with map.

This booklet, which bears the subtitle "A Work of National Redemption," is an argument for increased provisions for the antileprosy work in Colombia. Besides textual reproduction of the leprosy law (1939) and decrees for its implementation (1948 and 1949), much of it is devoted to reports of the Havana Congress. There is a brief sketch of the history of the disease in the country—where the first leprosarium was established in 1615, at Cartagena—and its distribution and the locations of leprosaria are shown in a map. Officially 12,000 cases are known, of which some 7,000 (58.7%) are in segregation. The appropriation for 1948 was somewhat over 4 million pesos (about US\$2.28 millions, less than 1.4% of the national budget, but about 33% of that of the health department), whereas some 9 millions was exacted from the taxpayers by an *impuesto de lazaretos*. Private charity is now contributing, and in that connection mention is made of two organizations, La Sociedad de Prevención Infantil and La Liga Nacional de Ayuda a los Leprosos, the aims of which are in keeping with some of the essential aspects of the reform. The leprosaria as established have no prophylactic value, it is asserted, and as treatment centers they are ineffective. The amount allotted for subsistence, housing and treatment amounts to about 2 pesos a day per patient, the minimal wage of rural labor. For the early detection of cases—of which some 10,000 are at large—only 98,000 pesos is allotted, enough for the treatment of less than 400. Emphasis is laid on the economic loss represented by the 500 new cases admitted each year, the flow of which could be stopped by an adequate system of case-finding and treatment. The 400,000 pesos allotted for the care of children of leprosy patients provides for only one-third of them, and that at 85 centavos a day. As a start, a 50% increase of the appropriation has been requested, a material part to be used for starting a series of institutions necessary for the functioning of the proposed reformed system.

—H. W. W.