

REVIEWS.

Lepra. Gomez Orbaneja, Jose and Garcia Perez, Antonio. 387 pp., 105 figs. (1 coloured on pl.) 1953 Madrid: Editorial Paz Moutalvo [45s.].

The book is divided into 11 chapters. The first two describe the aetiology and general pathology of leprosy infection. Chapters 3 to 7 give a description of the classification, and details of the 4 forms of the disease: indeterminate, tuberculoid, lepromatous and borderline. Chapter 8, with 63 pages, discusses the diagnosis fully from every point of view. The last 3 chapters are devoted to treatment, epidemiology and prophylaxis. There are 4 appendices dealing chiefly with rules and regulations for the control of leprosy in Spain. A bibliography is added.

In the preface the authors set forth the objects of the book. Much has been learned recently of the clinical aspects and the relationships of the various forms, there is new light on the question of resistance, and new and more effective forms of treatment have made it more possible to control the disease and efface its effects. They feel that when so much progress is being made and so much interest taken in leprosy, both in Spain and in other Spanish-speaking countries, there is need for a book which will give the latest information on the subject. The authors may be congratulated on their success in carrying out the objects which they set themselves. The arrangement of the subject matter in chapters and sections of chapters, the logical way in which arguments are set forth, the clarity of the style and the appropriateness and clearness of the illustrations, make easy and pleasurable reading. Recent world-wide literature has been read and digested by men with personal practical knowledge and experience, and they have thus been able to put together within a convenient compass a remarkable degree of detail.

The method of arrangement may perhaps be best illustrated by reference to chapter 2, which deals with the general infection of leprosy. The penetration of the organism by the bacillus is first described. Next are considered the possible responses of the organism to the penetrating bacillus and the factors which influence these responses, and which may belong either to the organism or the bacillus. Age, sex, race, heredity, constitution, climate, food, intercurrent diseases and the standard of living are next fully discussed. This is followed by a section in which the various aspects of immunity are set forth. The chapter continues with a description of the pathogenesis of the various syndromes of leprosy, those of the

skin, nerves, internal viscera, eyes, nose and throat, endocrines and lepra reactivation. Lastly there is a section on the biochemistry of leprosy infection.

The book is well printed and bound, and of a convenient size. It should be of great value in Spain where a determined and well-planned campaign is rapidly bringing the disease under control, and also in Latin America and other Spanish-speaking parts of the world where leprosy is still endemic.

ERNEST MUIR.

“ **Leprosy** ” by James A. Doull. Veterans Administration Technical Bulletin.

This bulletin of seventeen pages has been written by the Medical Director of the Leonard Wood Memorial (American Leprosy Foundation), presumably with the object of guiding the Veterans Administration in dealing with the matter. Perhaps it is unnecessary to state that “ veterans ” in the United States are ex-servicemen in Britain. To deal with leprosy in such a short pamphlet is no easy task, and it might be thought that such an account of leprosy is bound to be superficial and of little interest to those who have long studied the subject. Reading the pamphlet will show that this is not true. The reviewer has read it with great interest and finds it one of the most interesting presentations of this subject which he has read.

The following is a brief summary:—

After defining leprosy and its main types, the author gives an interesting discussion of the history of the disease. The reviewer found the following paragraph of interest:—

“ The principal source of leprosy on the American continent is supposed to have been infected slaves from Africa, although there is little doubt that French, Portuguese, and Spanish immigrants also carried the disease. In Mexico, there is a story that the severe Lucio variety, which is described later, is of Chinese origin. Leprosy was brought to the Upper Mississippi Valley by Scandinavian immigrants early in the 1800's. Data given in a recent study by Washburn (6) indicate that there were about 170 Scandinavian immigrants who developed leprosy, of whom 52 had the disease before leaving Norway. At least 76 were reported from Minnesota and most of the others from Wisconsin, Iowa, the Dakotas, and Illinois. In Minnesota, 7 cases occurred in American-born persons of Scandinavian parentage but only one in the third generation. There is no record of subsequent cases in other States. In Louisiana, the disease is thought to be of French origin and this is true also of a small focus at Tracadie, in New Brunswick, Canada.”

The geographical, sex and age distribution are discussed. It is considered that leprosy is commonly contracted in childhood but that, as the disease declines, the average age of onset may increase. It is stressed that it is not uncommon to contract the disease in adult life, and that prolonged residence in an endemic area, or prolonged contact, is often not necessary.

The account of the incidence of leprosy in American ex-service-men is of some interest. After the Spanish-American War, 32 cases were recorded in service personnel; after World War I, 51; of these 33 had not had war service outside the United States but 18 had been born outside and many came from the Southern States, where leprosy is endemic; not one came from the Northern States, where there is practically no leprosy. It is obvious that military service did not explain most of the cases. The same remarks apply to the cases, numbering 77, which Dr. Doull has traced following World War II. Most of these had possible or probable sources of infection apart from their military service. Dr. Doull mentions the two soldiers who developed leprosy after being tattooed at the same time by the same tattooer in Melbourne, Australia, the first lesion appearing at the same time in the tattooed area in both cases.

Under aetiology are discussed the bacillus, attempts at transmission to man and other animals, attempts at culture, and so on. The writer regards the lepromatous type as constituting the principal, if not the sole, source of infection. Accidental transmission is discussed and a well-known case recorded by Marchoux is cited. There is a section on leprosy-like diseases in animals. There is a short but reasonably good account of pathology, of the lepromin reaction, and of classification. The clinical description of leprosy is short but fairly comprehensive. The account of diagnosis is useful. The section on treatment includes a useful summary on the findings of the therapeutic trials conducted by the Leonard Wood Memorial. The following two sentences record Carville experience of the late results of treatment:—

"He (Erickson) studied the probability of arrest, defined as a 1-year period of negativity of skin and mucous membranes from *M. leprae* and freedom from clinical evidence of activity, and found that it increased from 3.6 percent by the end of the second year of treatment to a total of 73.0 percent by the end of the ninth year. Relapse occurred in 6 of 33 patients who were followed from 1 to 5 years after apparent arrest."

In the section upon control, the following paragraphs appear worth quoting:—

"There is no method for the prevention of leprosy which has been demonstrated to be effective. Granted that present-day theories regarding sources of infection and modes of transmission are correct, the practice of separating lepromatous patients from healthy contacts is a logical procedure. In practice it is of very limited application because of the expense which is involved. Countries in which the disease is frequent and which have attempted to provide sanatorium care for all lepromatous patients, as for example the Philippines, have found the burden extremely heavy. The effectiveness of the procedure is related to the duration of the infectious stage prior to discovery of the disease. In the Philippines, the attack rate for household associates remained high during a long period in which compulsory segregation of bacteriologically positive patients was in force.

"Leprosy is a disease in which the balance between the host and the parasite is nearly equal. The disease has persisted for long periods in most

areas where it is prevalent, yet it seldom exhibits any tendency to increase markedly. In the individual, it exhibits a very chronic course with a tendency towards recovery. It would seem, therefore, that wide and properly directed use of the sulfones might, by healing lepromatous ulcers and shortening the period of infectiousness, have a favorable effect not only on the individual patient but also on the trend of the disease. Outpatient centers should be established in every area where the disease is endemic and efforts be made to treat all lepromatous patients. In the past 5 years much has been done in this direction in the Belgian Congo and certain other countries. At the same time, therapeutic research is necessarily directed especially towards discovery of a drug with bactericidal properties."

The final paragraph on BCG stresses the need for more experiment before definite opinions on its value can be expressed.