

## BOOK REVIEW

**La Lèpre.** Diagnostique et Traitement. By A. DUBOIS. Published under the auspices of the FOPEDA and FOREAMI. Brussels: Weissenbruch S. A., 1955, 72 pp.

This small book is actually—although the fact is not indicated—a second edition of a similar one of a slightly different title published in 1939. It is written from the author's long experience of leprosy in the Belgian Congo, where the antileprosy campaign is being pursued with great vigor. The government has appointed leprologists and placed large quantities of sulfones at their disposal, and the Red Cross and the Father Damien Foundation, under whose auspices the book was published, are also extending their activities. Hence the need of this book, which gives the essentials about diagnosis and treatment simply and clearly. After a few paragraphs on history and geography, etiology is discussed briefly. Under pathology the host-bacillus relationship is treated with respect to five classes of subjects: (1) refractory subjects in whom there is complete escape from the disease (the role of tuberculosis in bringing this about has yet to be established); (2) those in whom the infection is latent; (3) those in whom there are only a few macules of doubtful nature, and who are regarded as "suspects"; (4) those with few bacilli and a benign form of the disease, generally classified either as tuberculoid or indeterminate, and which constitute 80-85% of cases in the Belgian Congo; (5) those with malignant (lepromatous) leprosy, with many bacilli.

The descriptions and illustrations make it easy to recognize the different kinds of lesions, distinguish leprosy from other diseases, and classify the different kinds of cases. Exception is taken to the Madrid Congress classification which includes all nonlepromatous flat lesions as indeterminate; many of these should be designated "simple." [Actually, one class of such flat lesions was put into the tuberculoid type by the Madrid Congress.] An adequate account is given of treatment, DDS being recommended as the drug of choice.

Prophylaxis is dealt with very briefly in one page. In the appendix the subjects of staining of the bacilli, the preparation of lepromin and the reading of the lepromin reaction, leprosy of the eye, estimation of sulfone concentration in the blood and urine, treatment with iron preparations, and pharmacology and therapeutics are explained in more detail.

The author makes no claim to have written a textbook, but he has succeeded well in accomplishing his object of supplying clearly and concisely all the information necessary for diagnosing and treating leprosy.—[Based on a review in *Trop. Dis. Bull.* 53 (1956) 119.]

**Tuberculosis.** Bulletin of the World Health Organization 12 (1955) 1-310 (Nos. 1-2), Geneva: WHO. US\$4.00, £1, Sw.fr.12.

Strictly speaking this publication is not a book, but in effect it is as much a book as many transactions of symposium meetings. In subject matter it does not touch on leprosy, but there is in it much of interest to any student of any mycobacterial disease.

Besides an (unsigned) introduction for orientation, it consists of 18 articles ascribed only to the offices from which they emanate; none is signed by individuals, but footnotes tell who prepared them, and sometimes who did the work they deal with. Regarding the sources, only abbreviations are used in the following notes: USA = Tuberculosis Program, Public Health Service, USA; TRO = WHO Tuberculosis Research Office, Copenhagen; BLUC = Biophysics Laboratory, University of Copenhagen; DTI = Danish Tuberculosis Index; TIRC = Tuberculosis Immunization Re-

search Center, a joint project of the Danish government and WHO. Comments by the reviewer are in brackets.

1. Experimental studies of vaccination, allergy, and immunity in tuberculosis. 1. Design for a research programme. (USA) Pp. 13-29. A program of animal experimentation designed to compare responses to BCG vaccination with those readily observable in man, to determine the immunizing effects and if possible to establish a practical guide to successful vaccination.

2. Do. 2. Effect of varying the dose of BCG. (USA) Pp. 31-45. With increase in the dose of living BCG there was progressive increase in the resulting allergy, in the size of the vaccination lesion, and in the immunity effects. Heat-killed BCG gave weak allergy and low immunity effects, "yet the vaccinal lesions averaged about as large as would be expected from a corresponding dose of living BCG." [There is a possible question of whether induced or intensified lepromin reactivity resulting from repeated injections of that antigen signifies corresponding induced immunity. Note also the next item.]

3. Do. 3. Effect of killed BCG vaccine. (USA) Pp. 47-62. BCG vaccine that had been killed, whether by heat, light, or phenol, gave markedly reduced but not entirely abolished allergy and immunity effects, "yet the size of the vaccinal lesion was only slightly reduced."

4. Further studies of geographic variation in naturally acquired tuberculin sensitivity. (TRO) Pp. 63-83. Data on tests made on about 34,000 school children and 3,600 patients in tuberculosis hospitals in twelve countries, from the United States and Mexico around to Viet Nam and the Philippines, using first 5 TU and then retesting with 100 TU, confirm earlier reports of the existence of two kinds of naturally acquired tuberculin sensitivity, i. e., *specific* for virulent tuberculous infection, and *nonspecific*. The frequency of the latter varies greatly, and may have different causes, in different places. In veterinary work the analogous problem of separating the specific from the nonspecific reactions is being met by testing with different types of mycobacteria. [The problem of nonspecific (low-degree, high-dose) reactivity to tuberculin may possibly be of significance with respect to lepromin reactivity. It is conceivable that as yet unknown agent or agents responsible for that condition may play a part in preparing persons, not infected with either leprosy or tuberculosis, to react to lepromin—nonspecifically, by cross effect, as BCG vaccination does.]

5. Sensitivity of human population to human and avian tuberculin. (TRO) Pp. 85-99. This report is of testing done in India with tuberculins of different types, as in veterinary work, to separate specific and nonspecific reactions. The results indicate that the latter type of sensitivity is brought out more effectively by avian than human tuberculin. The identity of the nonspecific sensitizing agent is still unknown, but antigenically it seems more closely related to the avian than the human bacillus.

6. A preliminary assessment of BCG vaccination in India. (TRO) Pp. 101-122. An assessment of results in India shows specific tuberculin sensitivity (strong reactions to 5 TU) in all areas, but the nonspecific sensitivity (100-TU dose reactions) is the more prevalent in all areas. The latter was less frequent in high altitudes than in low-lying humid areas. Sample retesting after BCG vaccination revealed results often lower than expected, a fact not yet explained.

7. Certain characteristics of BCG-induced tuberculin sensitivity. (TRO) Pp. 123-141. Vaccination always produces, or increases, sensitivity to tuberculin, although the degree of change is sometimes low; hence the classification of postvaccination reactions as "positive" or "negative" is biologically without meaning. No evidence is found that allergy wanes or is lost after intradermal vaccination, and reports that it does so confuse the situation.

8. Suppurative lymphadenitis following intradermal BCG vaccination of pre-school children. (TRO) Pp. 143-167. An attempt to find ways to avoid this complication, or to minimize its frequency, without jeopardizing the success of vaccination.

9. The 5 TU versus the 10 TU intradermal tuberculin test. (TRO) Pp. 169-177. An evaluation of these two doses, each given alone to alternate persons, in Jutland. Either dose would seem suitable for single-dose testing in general populations.

10. Effect of exposure of tuberculin to light. (TRO & BLUC) Pp. 179-188. Prolonged exposure of tuberculin to strong sunlight and daylight should be avoided.

11. Tuberculin reaction size on five consecutive days. (TRO) Pp. 189-196. No difference of any practical significance was found from the second through the fifth day, so there was no need to adhere to a rigid reading schedule in the population concerned.

12. Repeated tuberculin tests in the same site. (TRO) Pp. 197-209. The response in the site of a previous test differs from that in a new site. The reactions appear sooner and fade sooner, attaining greater maximum size and becoming bullous more frequently.

13. Tuberculosis mortality in Finland. (TRO) Pp. 211-246. There has been a very rapid decline since the last world war, but since a similar pattern is found in countries where BCG has not been used there is "little compelling evidence" that much if any of the decrease is due to the BCG program.

14. Dual reading as a routine procedure in mass radiography. (DTI) Pp. 247-259. Of 12 experienced physicians who read the films, all without exception—but with great individual variations—overlooked significant abnormalities. The value of the mass x-ray survey can be increased, at relatively small expense, by independent second readings.

15. The relation of tuberculin sensitivity to pulmonary calcifications as an index of tuberculosis infection. (DTI) Pp. 261-275. It is concluded that, with the single 10 TU intradermal test, up to the age of about 50 years few persons not reacting were infected with tuberculosis, but after that age the results of the test do not correspond so well to infection or noninfection.

16. Tuberculin reaction side in human populations as a possible index of the prevalence of bovine infection; a preliminary report. (DTI) Pp. 277-283. The results in different parts of Denmark suggest that the average size of the tuberculin reactions is related to the prevalence in the past of tuberculosis in cattle in those areas.

17. Serological activity of various fractions of culture filtrates of the tubercle bacillus. (TIRC) Pp. 285-299. Culture filtrates, known to be antigenically heterogeneous, have been fractionated and tested variously. For one of several things, some fractions were at least 1,000 times more potent than others in sensitizing erythrocytes for the Middlebrook-Dubos test.

18. Statistical report of WHO/UNICEF BCG vaccination programmes. (TRO) Pp. 301-310. Statistics are given of this program from its beginning in 1951 to the end of 1953. Twenty-six countries in three continents have been assisted in mass vaccination campaigns involving the tuberculin testing of 43 million persons and the vaccination of 16 million.

—H. W. W.