

BOOK REVIEWS

Notes on Leprosy. By DHARMENDRA, M.B.B.S., D.B. (Lond.), Director, Central Leprosy Teaching and Research Institute, Chingleput, Madras. New Delhi: Ministry of Health, Government of India, 1960. Pp. vi + 203, with 283 figs. and 47 plates. (Obtainable from the Institute at Chingleput, price Rs 8/-.)

This book, based on the notes of the author's training courses, constitutes a considerable and valuable contribution. Nevertheless, it is expected to be followed by a more comprehensive textbook—for which reason, it is explained, this one contains no references to the literature.

Regarding the history of leprosy, the disease is of great antiquity of uncertain origin, with perhaps the oldest definite references ascribable to India. Distribution is also dealt with briefly, with the rough estimate of 5 millions—a welcome change from the usual 10 millions or more from sources interested in impressive numbers. There is a world map of distribution, which—as usual—shows endemicity in certain countries where only imported cases are to be found.

With something of understatement it is said that “it is now generally believed that leprosy is an infective disease caused by *Mycobacterium leprae*,” although it has not been possible to prove its relationship scientifically.

After what is properly called a “latent” period, the symptoms of onset are very variable, but the established disease is of two main forms, “benign” and “malign,” the differences due to differences of resistance of the infected individuals.

Following the Indian Association system of classification there are, besides the lepromatous class, the nonlepromatous one which is divided into tuberculoid, maculo-anesthetic, and polyneuritic forms, and the so-called intermediate class divided into indeterminate (with flat patches) and borderline (with thick patches).

The division of the tuberculoid type into minor and major is done secondarily, the distinguishing features being the extent and degree of thickening of the lesions. There is no mention of the development of “local immunity” which is exhibited under certain conditions in sites of healed major tuberculoid lesions. The polyneuritic form would be more clearly understood if, as the Cairo congress intended, it were confined to cases with only nerve-trunk involvement, without associated skin lesions (i.e., the “pure and primary polyneuritic type”).

The clinical description of the lepromatous form is quite acceptable; the diffuse variety of this type as seen in India is not common, if indeed encountered at all, in other countries. That of the borderline condition is also good, in the main, especially the statement that the differentiation of the lepromatous and borderline lesions “will depend much on the concept and experience of individual workers.” Nothing is said, however, of its usual origin as a reactional deterioration of tuberculoid leprosy. The indeterminate form is well described as cases not satisfactorily diagnosed as maculo-anesthetic or lepromatous, and of uncertain evolution.

The rather general description of reactions in leprosy—for which “lepra reaction” is recommended for lepromatous cases, but “some other suitable term” for tuberculoid cases—is disappointing since only one kind of reaction is described for each of these two types. The erythema nodosum leprosum condition is not named, but in a description which evidently applies to that kind it is erroneously said to have been called “pseudoexacerbation” by some workers. This chapter on clinical manifestations ends with sections on eye lesions and ulcerations of various kinds.

Chapters on general pathology and histopathology then follow. Visceral involvement would seem not to occur in tuberculoid leprosy, although in fact it has been revealed by liver biopsy. Regarding histopathology it is stated, correctly, that the subepidermal connective-tissue layer is not always affected in tuberculoid leprosy, and that only the lepromatous type of lesion is specific for leprosy. It is unexpected to find the essential cells of the leproma first spoken of as “epithelioid cells” which are said to show vacuolation and in advanced lesions to form foamy cells, or lepra cells, “the characteristic cells of this type.” For “epithelioid cells” in this connection one would read “histiocytes.”

Regarding diagnosis, at least one of the three cardinal signs of leprosy (loss of sensation, thickening of nerves, and the finding of bacilli) should be present, but the bacteriologic examination is not often necessary since diagnosis is usually made on clinical grounds alone. Differential diagnosis is covered with experimental thoroughness.

The matter of classification is then returned to, with first a chapter which is largely historical, with critical comments, and then one in which the six forms as arranged in the Indian Association scheme is discussed in detail.

The chapter on prognosis is along more or less conventional lines, as is also the one on epidemiology. There it is said that reports of the finding of bacilli in the skin of healthy contacts of lepromatous and nonlepromatous cases alike have to be interpreted with great caution. One learns that there is much less leprosy in the more humid parts of Bengal and Burma than in the drier parts, but the statement that similar considerations apply to different parts of China is unexpected in view of the fact that it is the southern part of China—as also of Korea—that is most affected.

Regarding treatment, one can go along with the author, who has had so many years of experience. The section on hydnoearpus oil, however, seems longer than is needed today. The descriptions of the various sulfone compounds are erudite. The discussion of their action and values is comprehensive, and those of other drugs are ample, including the thiosemicarbazone (which has certain advantages over DDS and certain disadvantages, which, however, have not prevented some workers from using it entirely), isoniazid, thiourea derivatives, thiol compounds (Etisul), and various other remedies. For lepra reaction, antimony is recommended; the corticosteroids often give prompt relief but are too expensive for general use. Procaine is often useful for neuritis. The treatment of trophic ulcer is dealt with quite fully, as is the subject of physiotherapy; reconstructive surgery is discussed more briefly, presumably because it is a matter for specialists.

Prevention is covered thoroughly in a long chapter in which it is held that the value of BCG has not yet been proved, and that the view that isolation can be dispensed with is erroneous. This subject and that of social problems are naturally slanted to a certain extent to conditions in India.

The *appendices* deal in detail with (1) the bacteriologic examination, (2) the recording of clinical findings, (3) the lepromin test, and (4) leprosy surveys. The first of these includes methods of preparing and staining of smears, and the bacterial index. In the third one the method of preparation of the author's “defatted” antigen is given in detail, but not any method—such as the one in the First WHO Committee Report—for the benefit of the many who would prefer to use the classical antigen.

The book is illustrated by some 47 plates, a half-dozen or so in color, most of which contain six or more pictures. All but 2, unfortunately, are assembled at the back, which is never convenient for the reader.

The virtues of this book far outweigh such deficiencies and omissions as have been mentioned—to do which is a thankless part of a reviewer's job. The price, it is said, has been set below the actual cost of publication, to help make it available to the wide circle which should have it. The book certainly is not an ephemeral product, and consequently deserves to have an index, far more detailed than the table of contents found in the front of the book.—H. W. W.

Sbornik Nauchnykh Rabot po Leprologii i Dermatologii. [Collected Scientific Papers on Leprology and Dermatology.] No. 13, 1959. Rostov-on-Don, Rostov Book Publishers, 656 pp.

This volume, which is similar to others dealt with in this department [see *THE JOURNAL* **28** (1960) 350 and 496] contains a total of 20 articles, of which 7 pertain to leprosy and 1 is preliminary to such a one. They all have brief summaries in French, which are translated here.

TORSUEV, N. A. *Epidemiology of leprosy and basic trends of scientific studies in the field of leprology* (pp. 3-16).—This is a brief review of the present state of the epidemiology of leprosy. Stress is laid on the importance of a thorough comparative study of the epidemiologic peculiarities of leprosy in different regions, the regular use of the Mitsuda test in the examination of contacts, and BCG vaccination. In the author's opinion preventive treatment by sulfones lacks scientific support. He recalls how necessary it is to find a perfect experimental model of human leprosy.

TCHIRAKADZE, G. *Contribution of the history of leprosy in Georgia* (pp. 17-20).—Georgian medical writings dating back to the 11th and 12th centuries are cited, which prove the existence of leprosy in Georgia in that epoch.

TRAPEZONTSEVA, R. A. and VESSELOVSKY, K. A. *Determination of catalase in the blood of leprosy patients* (pp. 21-28).—In the majority of leprosy cases the catalase content is reduced, and the catalase index has marked tendency to decrease, this being related to an alteration of the oxido-reduction process in the organism.

TRAPEZONTSEVA, R. A. and VESSELOVSKY, K. A. *Bromine, potassium and calcium metabolism in leprosy patients*. (pp. 29-42).—Based on the findings in 1,843 blood analyses of leprosy patients, the authors have demonstrated the existence of certain changes in the content of K, Ca and specially Br in the blood. A reduced level of K and Ca was observed only in advanced lepromatous cases, whereas a lower level of Br was found in the majority of the leprosy cases independent of the type and stage of the disease. In all probability these changes are related to functional disturbances of the nervous system.

TORSUEV, N. A. *The use of Preparation RD in the treatment of lepers* (pp. 43-47).—With patients suffering from acute and subacute neuritis, the gamma fraction of oxydiptheric acid is used in the form of a 0.25-0.5% aqueous solution, in doses of 0.5-1.0 mgm. given every two days by the perineural route. This causes the rapid disappearance of the painful syndrome. An endoneural injection is recommended in cases with very intense pains. The intramuscular administration of a 1% solution is indicated in the treatment of neuritic disturbances, especially in the initial stage. The injections are given every two days, 20 in number, in 0.2 mgm. doses. If the treatment is repeated, the injection dose is increased each time by 0.2 mgm.

LOGUINOV, V. and EFIMOV, I. *Influence of sulfones on the cardiovascular system of leprosy patients* (pp. 48-51).—Electrocardiographic examinations of 47 patients under sulfone treatment permitted the detection, toward the end of treatment, of quite pronounced pathologic changes in 22 patients. These had old lesions which had activated, or new lesions which had appeared in the course of sulfone medication.

DICHKO, A. S. *Investigation on the pathologic physiology of pruritus* (pp. 52-62).—The sensation of pruritus was provoked in skin grafts (Filatov technique), using a drop of 0.5% dionine on the excoriated surface of the skin. The normal skin reacts to this test

with localized erythema, vesiculation, and pruritus within 2 minutes' time. In the skin grafts, the pruritus was observed in the zones where the peripheral sensitivity (to pain, temperature, and touch) was modified or lost. Sometimes the dionine test performed on the graft provokes the appearance of pruritus in the region where the graft was made. Thus pruritus represents an independent sensation originating in the major hemispheres of the brain.

DICHKO, A. S. *The sensation of pruritus and the changes of the peripheral analyzer apparatus of the skin in leprosy* (pp. 63-70).—Twenty-nine leprosy patients were examined by means of the dionine test, a total of 94 tests being performed. Pruritus was provoked in areas of skin which were totally or partially anesthetic. There was no apparent relation between the pruritus and sensitivity to pain, temperature, or touch. In some cases the application of dionine produces pruritus in a symmetric area on the other arm, thus indicating that the appearance of this sensation is related to the process occurring in the cerebral cortex.

Premier Colloque International sur les Mycobactéries. Held at the Institut de Médecine Tropicale Prince Léopold, Antwerp, December 5-6, 1959. P. G. Janssens, Editor.

This symposium, of which an inadequate note was made in our last issue [THE JOURNAL 29 (1961) 114-115.] before the publication itself was received, covers the field widely and will be interesting reading for anyone concerned with the problems of the mycobacteria. In the discussions of the first day Professor Penso mentioned *M. leprae*, which organism, "if it exists," has not been cultivated by anyone. If there is mention of it by anyone else—apart, indirectly, from the article by Quertinmont and by Delville and Pattyn on a kind of ulceration which occurs in the Congo—it is buried in the text. The paper by J. Asselineau bears on the topic dealt with by Hanks in three papers in this issue. The titles are as follows:

GEURDEN, L. Introduction à l'étude des mycobactéries et des mycobactérioses.

DEVOS, A. Les techniques d'isolement des mycobactéries.

LESSLIE, I. W. Purified protein derivatives prepared from non-tuberculous mycobacteria, including *M. Johnei*.

HAUDUROY, P. Essai sur la classification des mycobactéries.

PENSO, G. L'identification des mycobactéries à la lumière de leur construction antigénique.

ASSELINAEU, J. Composition de la partie périphérique du bacille tuberculeux.

PALLASKE, G. Zur Frage der geweblichen Reaktionsweise bei den Tierinfektionen mit Mykobakterien und deren Gestaltungsfaktoren.

GERNEZ-RIEUX, CH. Le séro-diagnostic des infections provoquées par les mycobactéries.

MORTELMANS, J. Les infections à mycobactéries chez les animaux au Congo Belge et au Ruanda-Urundi.

HUITEMA, H. P.P.D. tuberculin and tubereulin tests in cattle.

QUERTINMONT, M. J. Les plaies à bacilles acido-résistants.

DELVILLE, J. P. and PATTYN, S. R. Aspect histologique des ulcères à B.A.R.

SCATOZZA, F. and MONDINO, G. Attempt to grow tubercle bacillus on Hela cells.

GUERDEN, L. Conclusions.

—H. W. W.