

BOOK REVIEW

STUDIES OF LEPROSY BASED UPON FUNDAMENTAL INVESTIGATION INTO TUBERCULOSIS.

Published by the Japan Leprosy Research Committee with the Aid of Tofu Kyokai (Japanese Leprosy Foundation), Tokyo, Japan, 1963, 161 pp.

This book was brought out under the sponsorship of the Japan Leprosy Research Committee, under the directorship of Tomosaburo Ogata, Emeritus Professor in the University of Tokyo, and an executive board of men of recognized competence in the fields of tuberculosis and leprosy, viz., Kikuo Hamano, Director of the Japanese Leprosy Foundation, Kanehiko Kitamura, formerly professor in the University of Tokyo, and Ken Yanagisawa, Vice-Director of the National Institute of Health.

The well known pathogenetic similarities of tuberculosis and leprosy, including a mycobacterial etiology, comparable cellular and tissue response, and significant immunologic relationships, have long drawn the attention of pathologists concerned with granulomatous reactions. In addition, similar techniques of epidemiology, with stress on the nature of infection and supervision of sources, have been brought to bear in the control of each disease.

In the monograph here reviewed, some 25 investigators have reported research on various phases of the interlocking problem. Dr. Ogata, out of long experience, has written the opening paper of a series of 25 articles. He deals in general aspect with the following: (1) similarities and differences in exudative-necrotic, and granulomatous phases common to tuberculosis and leprosy, (2) the variability of pathologic change in murine leprosy in mice of various strains, (3) the coexistence of tuberculosis and leprosy in man, (4) cross immunologic relationships in tuberculosis and leprosy, and

finally (5) differences in the distribution of pathologic changes in the two diseases. His studies have led him to conclude that the basic pathogenetic changes are the same, that the several phases of parasitism, exudation, necrosis, and granulomatous reaction characteristic of each, undergo somewhat similar changes and development in the course of each disease, that these phases depend upon interrelationships in resistance between parasite and host, and that an antigenicity common to the etiologic agents of the two diseases results in cross immunologic relations, which are important in increased resistance to each. The argument is fortified by numerous photomicrographs.

In the succeeding pages certain more specific relations are discussed. K. Kitamura indicates the importance of classification by anatomic type in leprosy and skin tuberculosis, noting that skin disease is apparently primary in leprosy, while skin tuberculosis occurs as a rule during an inactive phase of visceral tuberculosis.

K. Tanioku emphasizes the well known interrelationships in chemotherapy, stressing the roles of oxygen consumption and metabolism. In his opinion it is unlikely that anything as simple as constitutional make-up as revealed by acidfastness is responsible for the success of some of the antituberculosis drugs in leprosy. Other factors in pathogenesis, e.g., phenomena of allergy, may be more concerned.

T. Murohashi, who has promoted interest in the problem of differential staining, discusses the possible value of the malachite green-fuchsin staining procedure in distinguishing microorganisms of different type, their individual components, and live cells from dead cells.

The tuberculosis problem in Japan is reviewed by H. Oka and Y. Chiba, with special reference to tuberculin conversion, BCG vaccination and chemoprophylaxis by daily administration of para-aminosalicylic acid. Analysis of available data appeared to indicate a definite value in each procedure.

These opening papers are followed by a symposium of 18 papers on lepromin and leprolin, organized for the purposes of this monograph by K. Yanagisawa, who is himself coauthor of several of the papers. In his introduction Yanagisawa notes his indebtedness to K. Mitsuda for his original interest in the subject and his own hope that current research on the so-called unclassified mycobacteria will, in time, lead to a better understanding of the immunologic characteristics of leprosy.

These 18 papers are of multiple authorship. It would be impossible in reasonable space to review the results reported in each. Careful reading of the whole series will prove profitable for all interested in the lepromin and leprolin reactions. The papers devote attention to several preparations of lepromin in current use, the Fernández reaction, the Dharmendra antigen, and interrelationships between the tuberculin reaction and allergic reactions of significance in leprosy. On the basis of the latter a close immunologic relationship between tuberculosis and leprosy is postulated. A long bibliography is attached to this series of papers, consisting chiefly of, but by no means confined to, Japanese articles on the subject.

The monograph closes with a paper by Ogata and several colleagues from the National Institute for Leprosy Research and several national leprosaria, on histopathologic studies of the lepromin reaction. In brief, the Mitsuda late reaction is looked upon as an indicator of the functional state of the reticulo-endothelial system.

The monograph as a whole will repay careful study, particularly in the light of counterpart studies in centers of leprosy investigation elsewhere. In the whole series of studies there is a continuing emphasis on the cooperative element in research.

—E. R. LONG