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EDITORIALS

Editorials are written by members of the Editorial Board, and opinions expressed are those of the writers. Any statement that meets with disagreement will be of service if it but stimulates discussion.

THE BIOLOGICAL CLASSIFICATION OF LEPROUS LESIONS

The purpose of this note is to give credit where credit is due for the current classification of the lesions of leprosy on histological grounds, and to bring again to attention a question with regard to them which as yet is in dispute but which should be easy to settle.

The classification referred to divides all leprous lesions into three kinds on the basis of the reaction of (or at least within) the affected tissue to the infecting organism, as follows: (1) lepromatous, (2) inflammatory, and (3) tuberculoid, such lesions occurring in the skin and nerve tissues and corresponding to the various macroscopic and clinical pictures of the disease. Thus briefly is the matter stated by Klingmüller.¹ In more detail, Jeanselme² describes these lesions substantially as follows:

1. Neoplasms that are more or less well delimited, very rich in bacillary masses and globi, assuming, like the miliary follicles of tuberculosis and certain mycoses, the form and structure of a granuloma. Examples: the lepromas of the skin, mucous membranes, nerves and inner organs, in which are found the typical cellular elements (lepra cells) and tissue structure of leprosy.

¹ KLINGMÜLLER, V. Die Lepra. In Handbuch der Haut- und Geschlechtskrankheiten, vol. 10, part 2, Berlin, Verlag von Julius Springer, 1930, p. 525.

² JEANSELME, ED. La Lèpre. G. Doin & Cie, Paris, 1934, p. 204.

2. Inflammatory alterations, amorphous and in no way characteristic, often consisting of loose perivascular mantles of young cells and generally containing only isolated and scattered bacilli, the search for which is laborious. Examples: the initial lesions of the disease and noninfiltrated macules of the skin.

3. Lesions which histologically resemble more or less closely those of the lupus of Willan, the cutaneous sarcoids of Boeck and the hypodermic sarcoids of Darier and Roussy. Example: tuberculoid lesions of the skin and nerve trunks.

Both of these authorities ascribe this division to Lewandowsky, Klingmüller adding that Jadassohn had observed that similar changes probably occur in other organs than the skin, though as yet only the granulomatous form has as yet been definitely recognized in them, since the simple inflammatory condition cannot be proven to be specific. How it came about that Lewandowsky should have made such a contribution has long been a matter of question to the writer, since he is not known to have studied leprosy at all extensively. His special field has been tuberculosis, and in his monograph on the subject³ he does not go into the matter in question; but it would seem that he also wrote on leprosy in a publication not available to us.⁴

Actually, it appears, this classification of lesions was first propounded by Jadassohn, who made at least one important contribution to knowledge of leprosy and whose monograph on the subject⁵ deserves much more attention than it has received.

In the article in which he first described and named tuberculoid leprosy as such⁶ he stated:

We have thus three main forms: (1) the typical leproma; (2) the typical neurolepid, consisting of macules without changes of the granulomatous type, and (3) forms which exhibit a granulation tissue with foci made up of epithelioid and giant cells and with coagulation necrosis, clinically apparently pertaining to non-nodular leprosy and lacking the changes that are characteristic of that form. With regard to the bacilli [to summarize] they are abundant in the leproma, sparse or lacking in the other two; the true lepid seems to be not due to direct effect of the bacillus in the tissue while the tuberculoid lesions seem to be due to such effect.

³ LEWANDOWSKY, F. Die Tuberculose der Haut. In *Enzyklopedie der klinischen Medizin*. Verlag von Julius Springer, Berlin, 1916.

⁴ LEWANDOWSKY, F. *Leprosy*. In *Handbuch der inneren Medizin*, of Mohr-Staehelin (cited by Darier, in 1923, as then in press).

⁵ JADASSOHN, J. *Leprosy*. In *Handbuch der pathogenen Mikroorganismen* of Kolle and Wassermann, Jena, Verlag Gustav Fischer, 3rd ed., 1928, vol. 5, pp. 1063-1232 (second edition of the monograph).

⁶ JADASSOHN, J. Ueber tuberculoide Veränderungen in der Haut bei nicht tuberöser Leprosy. *Verhandl. VI Deutschen Dermat. Cong.*, Strasbourg, 1898.

Twenty-five years later Paul Unna⁷ restated Jadassohn's classification, adding:

While he rejected [the hypothesis of] differences of the germ and of the mode of infection [in explanation of these differences of the lesions] he concluded [that they were due to] differences of the disposition of the individuals, and found them to be based on the number of germs and on a peculiar tissue structure. The numbers of bacilli and the tissue reaction stand in inverse relation to one another: the stronger the first tissue reaction the fewer the bacilli, and the fewer the bacilli the more chronic the lesion. Jadassohn's student Lewandowsky has given this theory a positive basis.

Thus is explained how Lewandowsky came into this picture.

It is not intended to discuss here the moot question of the validity of the class of lesions in which the cellular reaction consists only of round-cell infiltration. Probably all students of the matter agree that there are to be found lesions which present only such changes for a period, until their ultimate course as either lepromata on the one hand or leprids on the other hand has been decided (i.e., the "indeterminate" lesions, the "initial" ones mentioned by Jeanselme). Also, probably no one would deny the existence of only banal chronic inflammatory changes in old leprids in which activity has completely subsided and the condition is therefore residual. There are, however, certain workers, of whom the writer is one, who have not seen in their material well-established leprids in activity that show only such changes; the active lesions of that kind, no matter how "simple" clinically, show some degree of the tuberculoid condition. It is to be said, however, that their material derives mostly if not entirely from non-European peoples. In the discussion of tuberculoid leprosy at the Strasbourg conference⁸ Noël remarked that tuberculoid leprosy is very common among African Negroes, and Rabello stated that in his experience in Brazil (to that time) the condition had been seen only in Negroes. In this connection the observations and conclusions of Ermakova⁹ are of considerable interest, and show at least that the matter requires further investigation.

—H. W. W.

⁷ UNNA, P., JR. Beitrag zur Frage - der tuberculoider Lepra. Virchow's Arch. 246 (1923) 256-261.

⁸ III^e Conférence Internationale de la Lèpre, Strasbourg, 1923. Paris, J. B. Baillière et Fils, 1924.

⁹ ERMAKOVA, N. The histopathology of simple leprids. THE JOURNAL, this issue, p. 495-508.