Clinica

6

RELATIONSHIP OF TUBERCULOID LEPROSY

Wade

In the correspondence section of this issue is a symposium that will be of interest to those who have concerned themselves with the questions of the real basis of classification of leprosy and the relations to each other of the various kinds of cases that are encountered. To what extent this correspondence—or the present discussion—will be satisfying is another matter.

The occasion for this symposium was a request from Dr. Solomón Schujman, of Argentina, for opinions on the questions: (*a*) Whether "tuberculoid leprosy" belongs to the neural type, (*b*) whether tuberculoid cases change to the cutaneous form, and (*c*) whether cutaneous cases change to tuberculoid. These questions were submitted to a number of persons who have cooperated with THE JOURNAL, and the replies that have been received are published in this issue. It seems in order to make an expression of appreciation to these contributors. Some of their opinions conflict, but those who

[1] THE JOURNAL 3 (1935) 201, and one to appear in the next issue.

may find it necessary to modify their views will at least have the satisfaction of having helped give emphasis to questions that require clarification.

One of the points brought out is that even now there is still lacking a general agreement of what is implied by the names commonly employed in classification. Another is that there has arisen a new phase of the question of what the term tuberculoid leprosy should be applied to. Finally, there are indications of differences of experience with cases of the kind that are usually recognized to be of tuberculoid nature.

It may be repetitious, but it nevertheless seems desirable to touch again on one cause of the persistent uncertainty regarding classification. The conference that put forward the classification now in use[1] had no intention of departing from the long-established practice of classifying leprosy into two *clinical* types—it being understood that the "mixed" or "complete" cases do not really constitute a separate type. The primary objective of the conference was to attain uniformity in the use of names and to define the main characteristics of the types, though with respect to the latter objective it is now realized that it was handicapped by incompleteness of existing knowledge of the nature of the skin lesions of the neural type. "Cutaneous leprosy" (which may be described informally as the malignant form of the disease), obviously is the term applied to the type in which the essential lesion is the *leproma*, the bacillus-rich, lepra-cell granuloma that typically predominates in the skin. There could have been no intention to include in this type all cases of leprosy with active lesions of the skin caused by the presence of the bacilli in them. The old idea that the *leprides*, characteristic of the comparatively benign "neural leprosy," are of nonbacillary origin had long since been abandoned, Lie and others having demonstrated the presence in them of bacilli in small numbers. Nor could the conference have intended to exclude from the neural type any cases of the general clinical group so designated merely because at a given moment no frank or gross evidence of involvement of the nerves has yet appeared in them. It is undoubtedly useful, for various purposes, to recognize as clinical subclasses (or subtypes) the more important variations from the usual run of cases of a type. This is particularly true of the neural type, in which are seen, for example, "early" or incipient" forms (meaning those with lesions of incomplete symptomatology and of perhaps especially uncertain future), "abortive" forms (those with spontaneously healed or "residual" lesions), and "tuberculoid" forms. But to raise any such varieties to the rank of separate types would serve only to confound confusion.

With regard to the so-called tuberculoid variety of the disease, information that has accumulated in the past five years seems to

[1] Report of the Leonard Wood Memorial Conference on Leprosy. *Philippine Jour. Sci.* 44 (1931) 449.

indicate very clearly that there is no justification for setting it aside as a separate type. Early in 1932, when the writer, in London,[2] was reporting on observations made in South Africa on the more generally recognized forms of that condition (which some authorities even then were still hesitant to ascribe to leprosy), Manalang, in Manila,[3] was making the first of a series of reports, on the pathology of ordinary, simpler macules of leprosy. He recorded the finding of tuberculoid changes in many of these lesions. This seemed to complicate the situation greatly, for it was the understanding of many—including the writer—that typically the skin lesions of neural leprosy were of banal chronic inflammatory nature.

In 1933 we had an opportunity to examine a number of biopsy specimens of simple macules from cases in Cebu. It turned out that most of the lesions that the clinicians considered *active* showed tuberculoid changes, usually of slight degree, while most of those that had seemed clinically *inactive* had only round-cell infiltration, mostly perivascular.[4] Other material collected a year later in Cebu and in China gave further evidence of: (*a*) the common occurrence of slight-degree tuberculoid changes in ordinary leprides, and (*b*) a correlation of the degree and other characters of this histological change with the clinical activity of the lesions and the amount of visible infiltration in them. Publication of these observations was postponed until the matter could be followed up more fully, in another region and in another racial group. This has been done recently in Ceylon and India. The findings, which will be published in full in due course, clearly support the general conclusions indicated, at least for this part of the world.

By studying the whole range of active leprides, from the earliest ones that can be diagnosed with any degree of certainty, whether in young children or in adults, up to the extensive ones that often are so conspicuous in old asylum cases, and from the most "simple" of these active lesions, through the moderately infiltrated and pebbled ones ("minor tuberculoid"), up to the grossly thickened ones ("major tuberculoid") which alone are called tuberculoid by most workers, we find as a general rule an uninterrupted gradation of essentially

[2] Wade, H. W. *Proc. Roy. Soc. Med.* (*Section of Dermatology*) **25** (1932) 47.
[3] Manalang, C. *Rev. Filipina Med. Farm.* **23** (1932) 43.
[4] Doull, J. A., Rodriguez, J. N., Guinto, R. and Plantilla, F. C. *Internat. Jour. Lepr.* **4** (1936) 141.

the same type of histological change.[5] Variations there are, to be sure, but these—so far as has yet been seen—pertain mainly to the degree of the condition, the tendency to involve the deeper layers of the skin and the nerves that are distributed through it, and the state of activity or retrogression. If this can be positively established, it must at least be agreed that tuberculoid leprosy of whatever degree cannot be divorced from the neural type. This question is worthy of joint investigation by the clinician and pathologist wherever leprosy is found, in order that it may be settled once and for all.

Besides the writings of Manalang referred to, the contributions of Rodriguez and also the reprinted article by Lara and de Vera published in this issue contain significant evidence on the matter. It is with such workers, who have paid particular attention to the histological examination of the leprides, that a new difficulty has arisen as to just what should be called tuberculoid leprosy, because from the viewpoint of pathology the condition is not limited to the cases in which it is definitely recognizable clinically.

If it is true that tuberculoid changes in some degree are usually or regularly found in the active macules (or parts of macules) of neural leprosy, it will be necessary to broaden our concept of this matter and to recognize that pathology affords no very clear reason for regarding tuberculoid leprosy as a distinct form of the disease. If such a distinction is made at all it will be solely for clinical purposes, in order to classify the different kinds of leprides encountered. In an article recently prepared[6] the writer suggests, as a result of recent work done with clinicians abroad, that it is decidedly useful to recognize, besides frankly "residual" lesions, three other varieties: "simple," in which the tuberculoid change, if present, is not evident clinically, and "minor" and "major" varieties (or stages?) of frankly tuberculoid lesions. But even with this the concept of tuberculoid leprosy as a thing apart should be abandoned.

With regard to the convertability of the tuberculoid form to the cutaneous, and vice versa, Lowe is the only contributor to the present symposium who reports having seen tuberculoid cases change to the cutaneous type, though Austin and Gougerot have seen cases

[5] In Calcutta it was learned recently that Lowe has come to much the same conclusions.

[6] To appear in the next issue of THE JOURNAL.

with both kinds of lesions. The experience of the Calcutta workers with major tuberculoid leprosy is probably unique. Anyone who has followed closely the literature emanating from that center must be aware that this condition is unusually common there, and it is certain that peculiar things are seen in some of the cases. We have reason to believe that, though Lowe has seen the conversion mentioned, he will agree with Rodriguez, Austin and Rose that on the whole the prognosis in this condition is good.

On the other hand, it would be surprising if the resistance to the infection that is exhibited in this relatively benign form of the disease should never, in any case, break down to permit the development of the malignant, cutaneous form. It will be understood that this change involves the development of actual lepromatous changes, whether in old leprides or separately. That is the significant condition, and not the mere increase in the number of bacilli in an active lepride to the point where they may be found in smears; that happens occasionally, especially in major tuberculoid lesions in a "reaction" condition. If any statement can be made at all about leprosy that will receive general affirmation, it is that neural-type cases do sometimes undergo this change, though we—most of us, at any rate—know very little about the actual process of the conversion.

Much the same must be said of the process that goes on when cutaneous cases undergo improvement and arrest. Wade and Pineda,[7] nearly ten years ago, reported cases in which definitely tuberculoid lesions had apparently developed under those circumstances, and numbers of similar cases have been seen by the Culion workers since then. It is true that Hayashi[8] has flatly asserted that tuberculoid lesions cannot exist in cutaneous cases, but there is reason to believe that the patients in his institution are as reluctant to submit to biopsy as those at Culion have been in the past. Granting that the tuberculoid condition signifies high resistance to the infection, and that (at least in the more marked forms of that condition) there is perhaps some sort of hypersensitization to the infectious agent, it should not be surprising if, when in cutaneous cases there is being acquired sufficient resistance to overcome the infection, there should develop in some of those cases the condition of the tissues which results in the tuberculoid variety of tissue reaction.

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[7] Wade, H. W. and Pineda, E. V. Trans. 7th Cong. Far Eastern Assoc. Trop. Med., India, 1927. Calcutta, 1929, vol. 2, p. 383.

[8] Hayashi, F. *Internat. Jour. Lep.* 3 (1935) 496.