CORRESPONDENCE

This department is provided for the publication of informal communications which are of interest, whether because they are informative or are suggestive and stimulating, and to serve as an open forum for discussions of matters brought up by readers.

CLASSIFICATION AND EVOLUTION OF TUBERCULOID LEPROSY

To the EDITOR:

In the last two years I have been especially interested in tuberculoid leprosy, and the articles on the subject that have appeared in THE JOURNAL have been very useful. However, there are certain questions on which I would like to have opinions of other leprologists.

1. Is the opinion generally accepted that tuberculoid leprosy should be classed with the neural type? For my own part I have not been able to arrive at an opinion on this point, but at present it is my impression that, because of its clinical, bacteriological, histological and immunological characteristics, and also its evolution, it forms a separate group.

2. With regard to the evolution of this form of the disease, have there actually been cases observed of typical tuberculoid leprosy (bacteriologically negative or with few bacilli, positive leprolin test, diagnosis confirmed histologically), to change into the common, typical cutaneous form of leprosy, with lesions of lepromatous structure containing abundant bacilli, and with negative leprolin test?

3. Has there been observed the contrary phonemenon, transformation of typical cutaneous leprosy into the typical tuberculoid form?

Personally I have not observed this transformation from tuberculoid to cutaneous, or the contrary, and certain other Argentinian leprologists (Fidanza, Fernandez, Baliña) have informed me that they have not observed it.

Hospital Carrasco
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SALOMÓN SCHUJMAN
Chief of the Leprosy Service

From Dr. J. N. Rodriguez, Cebu Skin Dispensary, Cebu, P. I.:

Dr. Schujman has raised some very interesting questions. I may say briefly that my answers to them all have to be in the negative. However, the matter should not be dismissed lightly. Separately I am submitting a short report outlining our observations in this clinic on patients exhibiting lesions that have been found histologically to be of tuberculoid architecture, as compared with those in which only round-cell infiltration was found. That report is purely factual. In this place I would like to offer the following considerations on the speculative or controversial side of the matter.

1. What criteria should be employed in arriving at a diagnosis of "tuberculoid leprosy"? Dr. Schujman apparently considers these to be: lesions bacteriologically negative or with few bacilli, positive leprolin test, and tuberculoid histological structure. Here we have the same debatable question that is met in many skin diseases: Should the diagnosis be based on the histological findings alone, or should the clinical picture be considered as well? We believe that the clinical aspect has to be considered also. With regard to the type of case that has been dealt with by Wade (which I am informed he now calls, for purely clinical purposes, "major" tuberculoid), there can be no question as to the diagnosis. But what about cases having atypical cutaneous manifestations, with pathological changes in which there is predominantly round-cell infiltration but at the same time a few definite or suspected tuberculoid foci? How should one classify cases with several lesions, some of which show a tuberculoid structure and others chiefly the round-cell architecture? How about those with lesions that histologically are tuberculoid but in which the leprolin test is negative?

2. Is it not true that, although the tuberculoid architecture is typically and most characteristically found in the so-called tuberculoid variety of leprosy, it is also present to some degree in most if not all of the lesions characterized by round-cell infiltration, provided they are searched for diligently and systematically in serial sections as had been done by Manalang? If this is true, should these latter cases be considered also as tuberculoid leprosy? Some of them have been found to be leprolin-negative or only weakly positive, and one of the two cases described in the accompanying article as having become cutaneous had one small "tuberculoid (?)" focus in the sections studied. Much depends on the interpretation of what constitutes tuberculoid leprosy.

3. Going further than Schujman I would ask: Have any cases of typical tuberculoid leprosy actually been observed to change into common, typical, moderately advanced neural cases, with atrophies and contractures? This has not been seen in our experience, but we have seen several cases with tuberculoid lesions coexistent with atrophies and contractures. In these cases the neural signs seem to have appeared first.

4. If the tuberculoid cases do not usually change to either the typical cutaneous and or the advanced neural types, then what happens to the majority of such cases? From our experience it seems probable that most of them tend to resolve spontaneously, i. e., become abortive or frustrated cases. We have actually observed several cases in which typical tuberculoid plaques had involuted into atrophic scars which, on biopsy, showed nothing more than the changes

found in any scar tissue. The process of clearing up may take many years, however.

5. What is the effect of chaulmoogra treatment on tuberculoid leprosy? As to the ultimate effect, we do not know; our cases have not been observed long enough. But if it is true that most of these cases do tend to become naturally frustrated or abortive, claims regarding the cure, by means of chaulmoogra injections, of "incipient," "early," or "closed," "bacteriologically negative," "neural" cases, most of which are probably of tuberculoid nature, should be accepted with extreme caution to say the least. The involution of the patches may be hastened by local intradermal ("plancha") injections, but in our experience apparently not faster than by painting with trichloracetic acid, for instance. If some people prefer to use chaulmoogra in this type of case, well and good, but it is an entirely different matter when they give all the credit for the "improvements" or "arrests" among their tuberculoid cases to these injections. The figures given in the accompanying communication show that, in Cebu at least, the majority of recognizable incipient or early bacteriologically negative cases belong to the tuberculoid type. Needless to say, many cases of this type are also lurking under the guise of "nerve" leprosy. There is need of caution in interpreting the results of any treatment in tuberculoid leprosy.

On the other hand, when one is dealing with persistently bacteriologically positive cases the chances are that there are not many of the tuberculoid variety among them; i. e., that they are most likely of the cutaneous type. Although even among these cases there are some that tend towards spontaneous arrest, the large majority certainly tend to progress actively. For this reason any well-established claim to the production of a considerable proportion of arrests among such cases as the result of a special treatment certainly deserves the most serious consideration. It is precisely in the earlier and middle stages of the cutaneous type of the disease that the chaulmoogra treatment, though so disillusioning in many cases, gives more consistent and dependable results than any other drug that we know of.

I have never advocated the policy of *laissez faire* with regard to closed or incipient leprosy—of waiting until they "become advanced grades," whatever that means. I hold that, particularly in this stage, improvement in the general care, hygienic surroundings, and diet, if these be deficient, is of paramount importance, and that treatment should be chiefly along these lines. In the light of the above discussion my previous statement, which seems to have upset some of our colleagues, may not be as foolish as it seems at first blush: "*The chaulmoogra-oil derivatives* do not seem to be as effective in incipient leprosy as in the more advanced cases with lesions showing acid-fast bacilli." Perhaps the word "useful" would have been more appropriate than "effective"; otherwise, the statement as it was written three years ago still stands.

From Dr. John Lowe, School of Tropical Medicine, Calcutta:

With regard to the questions asked by Dr. S. Schujman, of Argentina, it happens that I am at present engaged in preparing an article for publication which expresses my own opinion on this very subject. For the present I may

answer the questions very briefly: (*a*) Yes, "tuberculoid leprosy" should be classed in the neural type. *b*) Yes, we have seen cases change to the cutaneous form. (*c*) No, we have not seen transformation from the cutaneous to the tuberculoid form.

These answers are made on the basis of my own personal experience and that of other workers in the leprosy research department of the School of Tropical Medicine here in Calcutta.

From Drs. P. D. Strachan and R. C. Germond, Botsabelo Leper Asylum, Basutoland:

In reply to the question regarding the coexistence of cutaneous (lepromatous) lesions in the same patient with tuberculoid lesions, we have to state that, although typical tuberculoid leprosy is fairly common here, we have never seen an undoubted case of the combination mentioned in which the diagnosis was confirmed bacteriologically and histologically.

From Dr. C. J. Austin, Makogai Leper Station, Fiji:

Your letter conveying Dr. Schujman's inquiry has been badly delayed by having taken a circuitous route. Although this will perhaps make my reply too late for your purpose, that will probably not be regretted in view of its unsatisfactory nature.

In the first place I am not too happy about my own diagnosis of a case of tuberculoid leprosy. In one of Wade's articles he stresses the distinction between such a case and a cutaneous case with tuberculoid lesions, and that I think, is my main difficulty. In my opinion I have seen tuberculoid lesions in both N1 and C2 cases. The only two cases of ulnar nerve abscess I have observed have been in the C2 type. On the whole I think the appearance of tuberculoid lesions in a cutaneous case is of good omen from a prognostic point of view, but I should question the advisability of trying to make a separate group of such cases. It is important to recognize the lesions as a manifestation of good or improving resistance, but I must admit that I cannot see anything to be gained by regarding it as a separate group.

From Dr. F. G. Rose, Mahaica Leprosy Hospital, British Guiana:

The tuberculoid variety of leprosy is rare in British Guiana. Of about 1,050 cases of leprosy of which we have record during the last ten years, only thirteen were so classified. Prior to the Manila conference these cases were dealt with as of the neural type, for the reasons that (*a*) in most instances no bacilli could be found, and in a few cases only a few bacilli, and (*b*) seven cases out of the thirteen also had subjective or objective signs of nerve involvement. Since the adoption of the Manila terminology we here, like others elsewhere, have felt some difficulty in classification, and we have classified these cases as C-N, the C part being placed first because the cutaneous manifestation is the more obvious.

Two of our cases have disappeared, one has died of pulmonary tuberculosis, some have cleared up completely, and none has shown any evidence of progress of the disease up to now; the prognosis is distinctly good. None of the cases has at any time shown the coexistence of or transition to ordinary cutaneous leprosy.

The word "tuberculoid" seems unfortunate, as it might suggest some connection with another disease; for the same reason the term "tubercular leprosy" was dropped. I suggest "neuro-dermal" instead; "neuro" first because the condition seems to present more relationship with neural than cutaneous leprosy, "dermal" to indicate the accompanying skin lesion (compare dermal leishmaniasis). We should thus be able to preserve "cutaneous" for the other type of leprosy. Neuro-dermal would of course be a subdivision of neural leprosy.

From Dr. L. F. Badger, Leprosy Investigation Station, Honolulu:

In regard to the inquiry relative to tuberculoid leprosy, I am afraid that we in Hawaii can offer little information. We have had so few cases that fall into that group, as we understand it, that we are unable to reply to the questions asked by Doctor Schujman.

From Dr. H. E. Hasseltine, National Leprosarium, Carville, Louisiana:

I hardly feel that I am qualified to answer the questions asked by Dr. Schujman for the reason that, while my interest in leprosy in general has always remained, I have not followed the literature closely during the eleven years since I left that work at Honolulu. However, were I required to give an answer to his first question, I would state that at present I would not place tuberculoid leprosy in either class. It practically is the type that at Honolulu I used to regard as properly belonging in a class by itself, and I used to consider it as "maculo-nodular" to distinguish it from maculo-anesthetic.

I do not know that I can cite a single instance in which a case of this type has become one of typical nodular leprosy. I recall distinctly one patient whom I paroled at Honolulu, feeling that he would probably relapse. I saw him ten years later and found that he was still in the same condition as when paroled, namely, with some paralyses, atrophy and a foot drop, but he had not shown any change for the worse or any evidences of leprous activity.

We do not have many of the so-called tuberculoid cases here. What few we have are chiefly Orientals, such as Chinese or Filipinos. Most of the white and the Negro patients here exhibit either the ordinary nerve type, or the cutaneous type in very marked degree, usually with some nerve involvement, so that they would be classed as mixed under our old classification. We have recently had a paroled case in a Chinese boy who has returned with what seems to be a typical tuberculoid exacerbation, and he will be studied with interest.

From Prof. H. Gougerot, Paris:

Je réponds bien volontiers à votre questionnaire.

1. Non, la lèpre tuberculoïde n'est pas une lèpre "nérveuse." Elle est une lèpre "cutanée" due à l'action locale du bacille de Hansen dans les lésions. Elle constitue une forme spéciale. Le regretté Professeur Jadassohn d'un côte, moi-même indépendamment de lui, nous étions arrivés à la conclusion que la lèpre tuberculoïde est due au petit nombre des bacilles et à leur répartition à l'état d'unité isolée ou presque, au contraire des lépromes classiques dans lesquels les bacilles sont en amas.

2. Nous avons observé des lésions de lèpre tuberculoïdes (paucibacillaires) coexistant avec des lépromes (à structure macrophagique et riches en bacilles). Nous n'avons pas vu les lésions se transformer les unes dans les autres.

From Dr. P. Lampe, Director, Koningin Wilhelmina Institut voor Lepra Onderzoek, Batavia.

In offering a reply to Dr. Schujman's questions I have to say that when I was in the West Indies my attention was not directed towards the differentiation of neural, tuberculoid and cutaneous cases. In Java tuberculoid leprosy is apparently rare. Of the twelve patients now under observation at the leprosy institute for purposes of study, only one is suffering from that form of the disease (see photographs). However, as soon as we can we will take up the histopathology of such cases.

My provisional opinion may be expressed as follows: (*a*) Up to the present there are no cogent reasons for classifying tuberculoid leprosy in the neural type. The histopathological structure, the paucity of bacilli, and the evidences of immunity are all of secondary nature and do not affect the fundamental criteria of "neural leprosy." (*b*) On the other hand, there is no reason for classifying tuberculoid cases as of the cutaneous type, seeing that the typical granuloma formation ("leprotic reaction") is absent. (*c*) Consequently, in my opinion tuberculoid leprosy stands by itself. (*d*) The transition of the tuberculoid form into either the neural or the cutaneous form has not been observed by me, but my attention has only recently been directed to this subject.

[The photographs sent by Dr. Lampe with his reply represent so clearly one form of the tuberculoid variety of leprosy that, as an exception for this department of THE JOURNAL, they are reproduced here. This form, which is a more or less acute "reaction" condition, is particularly liable to be diagnosed as cutaneous leprosy. This is especially the case when the lesions are found to be bacteriologically positive, which is not uncommon, though typically the bacilli are relatively scanty. Cases of this kind are frequently encountered in Calcutta, and a report of recent observations on such cases will be published in due course. Referring to the photographs, attention may be called to the sharp limitation of the erythematous lesions on the face and body (which differ quite typically in degree of elevation in these two locations), and also to the not uncommon involvement of the palm.—EDITOR]

From Prof. Baliña, Buenos Aires, Argentina: Until lately the study of tuberculoid leprosy had been limited to a small number of cases. Attention having now been called to this form of the disease, many observers will contribute in the near future to a fuller knowledge of the subject. It is probable that in time tuberculoid leprosy will be found to form a distinct group, but at present I think, following Wade's opinion, that it is prudent to regard this form as a sub-group of neural leprosy.

From Prof. E. P. Fidanza, Rosario, Argentina: In answer to the questions formulated by Dr. Schujman I wish to state: (*a*) Though the majority of authors are inclined to place the tuberculoid form among the nervous forms of leprosy, I cannot concur. Its clinical, histological and bacteriological characteristics, and especially its evolution, differentiate it markedly from the nervous form. Probably after further observations and careful study this new form, recently recognized, will be considered as a special one. For the present it is better to keep an open mind and to await new facts before we group it with the nervous form. (*b*) I recall a few cases of tuberculoid leprosy, diagnosed clinically, that later

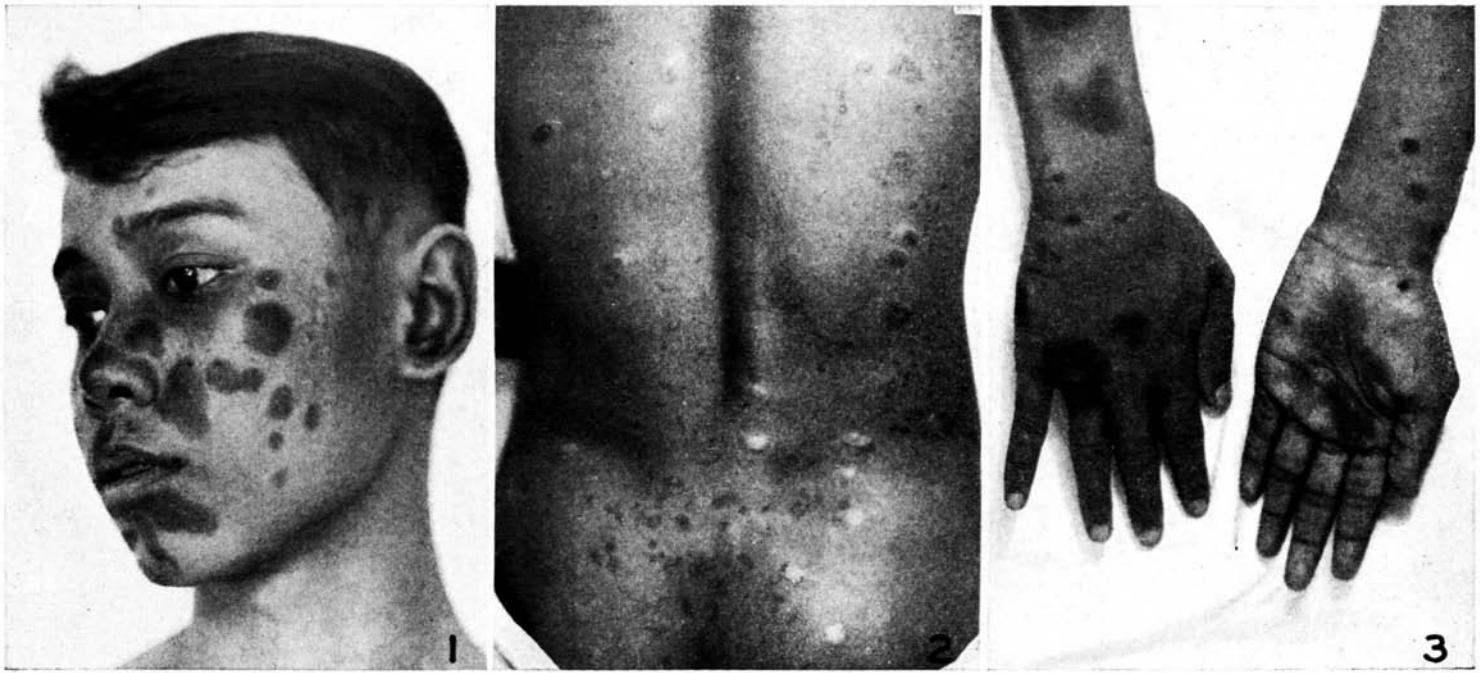

PLATE 42. Case referred to in communication of Dr. P. H. J. Lampe

developed into the serious cutaneous form, but since no histological examination was performed I cannot be absolutely definite in this statement. In none of the cases that have been carefully studied have I seen this transformation; on the contrary, with time marked improvement was usually observed. I have never seen a typical cutaneous case develop into a tuberculoid one.

From Dr. Jose M. M. Fernandez, Rosario, Argentina: I think that tuberculoid leprosy should be placed in a group by itself, because its clinical, histological and immunological characteristics are quite definite. I have never seen either the evolution of a tuberculoid case into the common typical cutaneous form, or the contrary phenomenon.

Dr. Schujman, in a subsequent letter, offers the following comment: I wish to explain some of the reasons which cause me to think that this variety of leprosy merits classification as a separate group: (*a*) Clinically there are certain characteristic differences between the neural and tuberculoid forms, such as the infiltrated and papulated border; histologically the lesions show typical follicles with Langhans's giant cells; and immunologically the leprolin test is always frankly positive. (*b*) Above all, while the neural form sometimes changes to the cutaneous form, and vice versa (the latter giving the secondary neural condition), I have not observed in any of the 25 cases studied, some of which have been observed closely for six years, a transformation from typical tuberculoid leprosy into the cutaneous form, or of the cutaneous form into the tuberculoid. I believe, therefore, that if the majority of leprologists assert that they have never seen typical cases of tuberculoid leprosy (confirmed histologically and immunologically) change into cutaneous leprosy, and vice versa, this will be a sufficient argument for the separation of the tuberculoid from the neural and cutaneous forms. This separation would offer advantages from the viewpoint of prognosis, epidemiology and prophylaxis.