EDITORIALS, *REVISTA BRASILEIRA DE LEPROLOGIA*, ON CLASSIFICATION

I[1]

It is evident that, in spite of the progress made at the recent congress at Cairo, a satisfactory solution of the question has not been arrived at. This fact was recognized by that meeting, which proposed a provisional classification and left the definitive solution of the problem for the next congress. This cautious attitude was the result of the discordant view of the "South American minority" of the Committee on Classification.

Taking advantage of a long stay in São Paulo, Dr. José Maria Fernández, of Rosario, after preliminary exchanges of ideas, suggested the establishment of the South American point of view, and to that end we now open a discussion of the matter. Our aim, and one of major significance, is that this question shall be debated, and that the classification here published shall receive the criticisms and suggestions required to make it, not a classification based on personal or regional views, but one which is truly South American.

Once its general basis is established, it should be put into practice beside the current classification used in our various services, so that in 1943 we may have, not a scheme of classification still awaiting practical application, but one already proved by experience and based on comparative studies.

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The primary classification of the forms of leprosy *depends fundamentally upon the clinical criteria of the lesions*, to which

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[1] *Rev. brasileira Leprol.* **7** (1939) 215-217. Slightly condensed, with italics introduced in the text at one point.

a particular anatomopathological structure always corresponds, and secondarily the immunobiological and bacteriological criteria. On this basis three fundamental forms are established, which represent the morphological appearances of the three structural types found in leprosy. Two of these are polar forms, according to the felicitous designation of Rabello, Jr., and one may constitute a virtual type of transition between them. Thus we have as fundamental forms:

(*a*) Lepromatous form (L), corresponding to the lepromatous structure;

(*b*) Simple inflammatory, incharacteristic (I), corresponding to the nonspecific chronic inflammatory structure; and

(*c*) Tuberculoid form (T), corresponding to the various tuberculoid structural types.

We must admit, however, the existence of a residual form of leprosy as a terminal evolutive expression, related to favorable immunobiologic conditions.

Subtypes.—For distinguishing the subtypes the prevailing criterion is that of localization, which in other classifications is the fundamental one. On this basis there are:

Lepromatous form	(*a*)	cutaneous
	(*b*)	neural
	(*c*)	mixed or complete (involving more than one anatomical system)
Simple inflammatory, or incharacteristic form	(*a*)	cutaneous
	(*b*)	neural
	(*c*)	cutaneo-neural
Tuberculoid form	(*a*)	cutaneous
	(*b*)	neural
	(*c*)	cutaneo-neural

The pure lepromatous neural form is apparently little known, because of lack of its anatomopathological study, which is difficult; but it is probably more frequent than is realized, according to autopsy findings.

Clinically, what would be classified as lepromatous are the cases presenting lepromas, lepromatous infiltrations, lepromatous macular lesions, etc., and the common nerve trunk lesions of lepromatous structure. Bacteriologically these cases are always and invariably positive, and the lepromin reaction is always negative.

In the simple inflammatory form would be included the [cases with] macular and erythemato-dyschromic lesions, trunk neuritis, areas of anesthesia, trophic phenomena, amyotrophias, etc., the histological structure of which is incharacteristic;

the immuno-allergy is unstable, and the bacteriology is likewise variable. Transitional forms [exist] which, in general, probably evolve most frequently to the lepromatous, although they may also evolve to the tuberculoid.

In the tuberculoid form would be included all of the [cases with] tuberculoid lesions, primary or secondary, as well as the reactional forms of this clinical modality, including the manifestations of nerve involvement. With the exception of the reactional forms the bacteriology is always negative, and the immunological reaction is always positive.

II [2]

For the purpose of establishing a classification of leprosy which is in agreement with our present knowledge of the disease and at the same time which reflects the opinion of the majority of the South American leprologists, this Revista opened a discussion of the matter in its last number. The new classification . . . . *is based fundamentally on an anatomopathological criterion,* to which a special clinical aspect always corresponds.

Presenting it in its three fundamental types, with their different subtypes,[3] it was our intention that the fundamental features of the question should be brought under discussion, and that the question of terminology should be considered as open, to be settled later. Thus, among the designations which are not satisfactory, the simple inflammatory or incharacteristic form awaits a suggestion for a more appropriate name.

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The question of the fundamental forms—based, as said, on the anatomopathological criterion with due clinical correlation —is in our opinion justified especially for simplification, and to give a more scientific orientation to the general classification.

Regarding the fundamentals of other classifications, we propose here only to justify the discarding of the neural form as a fundamental one. The nerve changes due to the leprous process, it is now amply proven by anatomo-pathology, result from changes of either lepromatous or tuberculoid nature or

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[2] *Rev. brasileira Leprol.* **7** (1939) 335-338. Somewhat condensed, and with italics introduced in the text at one point.

[3] Here follows in the original a tabulation precisely as given above under the heading "subtypes."

from an inflammation without special characteristics, as is seen in the skin. Thus, although the disease manifests itself by distinct neural symptoms—anhydrosis, anesthesia, amyotrophia, etc.—the nature of the [nerve] lesion that causes them is always one of the fundamental types, lepromatous, tuberculoid or incharacteristic; and when the neural symptoms are associated with cutaneous manifestations of the disease, the lesions of the nerve are always of the same nature as those of the skin. The neural form gives only a topographical idea of the disease and not an essential or fundamental characteristic.

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The three fundamental types so clearly separated by the structural criterion are further distinguished by factors of clinical, bacteriological and immunobiological nature, which complete the perfect individualization of the types. Here is a brief schematic exposition of these factors:

1. *Clinical factors.*—The clinical manifestations of the three fundamental types are well characterized. In the *lepromatous* form there are encountered: lepromas, lepromatous infiltrations (conglomerations of lepromas), diffuse infiltrations, and lesions of the macular type chiefly characterized by tawny color. The most important aspect of these cutaneous manifestations lies in the involvement of the skin which surrounds the lesion; although it looks apparently normal it is invaded by the leprotic process. In the *tuberculoid* form we have a modality of lesion the morphology of which is generally typical, permitting its diagnosis from simple observation, although there are lesions whose morphology is banal yet with tuberculoid structure. In the lesions of this form the predominant fact is the perfect delimitation of the lesion within the objective limits, never involving the surrounding skin. Between these two extreme forms there are the clinical manifestations of the *incharacteristic* form: generally erythemato-hypochromic lesions which may or may not show clear-cut outlines. These lesions usually evolve later to one of the two other fundamental forms.

2. *Bacteriological factors.*—In these factors the distinction between the fundamental forms is still more marked, and it can be expressed numerically, in a very approximate way, as follows:

Lepromatous form	mucosa, 95% positive lesion, 100% positive
Tuberculoid form	mucosa, 2% positive lesion, 5% positive
Incharacteristic form	mucosa, 50% positive lesion, 50% positive

It is evident that these figures indicate only in a schematic way the relations between the results of bacteriological examination in the different forms.

3. *Immunobiological factors.*—In this we depend upon the results of

the Mitsuda-Hayashi reaction. The position of the three forms is, as before, approximately:

Lepromatous form,	2% positive
Tuberculoid form,	90% positive
Incharacteristic form,	50% positive

From this are deduced conclusions with regard to prognosis, poor in the lepromatous form, good in the tuberculoid form, and variable in the incharacteristic one.

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In the light of these facts the three fundamental forms may be characterized as follows:

Lepromatous form.—Clinical manifestations in the skin and nerves, generally involving more than one anatomical system; bacteriologically almost always positive; representing a state of total anergy, with poor prognosis.

Tuberculoid form.—Clinical manifestations in the skin and nerves; generally negative bacteriologically; representing a condition of allergy with good prognosis.

Incharacteristic form.—Clinical manifestations in the skin and nerves; bacteriologically of variable positivity; representing generally a state of transition of the disease, and of unstable immuno-allergy.