

## THE STATUS OF BORDERLINE LEPROSY

In March 1960 there was held in Rio de Janeiro a symposium on borderline leprosy, under the auspices of the Brazilian Association of Leprology. One of the papers read there, by J. Gay Prieto, based primarily on things seen in Africa and Indonesia, appears in this issue.<sup>1</sup> There is also a detailed abstract of two others of the papers, by Nelson de Souza Campos<sup>2</sup> and Paulo Rath de Souza,<sup>3</sup> based on experience in Brazil, who collaborated and presented their conclusions jointly. Those papers have been translated from the Portuguese, but it is not certain if we can reprint them.

The most significant feature of these papers is the recommendation that the borderline group, as recognized in classification by the First WHO Committee (1952), and by the Madrid congress (1953), be abolished or modified. It is proposed that such cases should be grouped together with reactional tuberculoid leprosy (and also, by Gay Prieto, with relapsed tuberculoid cases). Emphasis is laid on the individualization of reactional tuberculoid leprosy—first done by de Souza Campos in 1940,<sup>4</sup> in the same year that Wade and Rodriguez<sup>5</sup> called attention to the borderline condition (“borderline tuberculoid leprosy”)—as distinguished from reactional activation of tuberculoid cases (de Souza Campos and Rath de Souza, 1954),<sup>6</sup> but the less distinct differentiation of the former from borderline. In reactional activation, it is held, the cases remain within the polar type, whereas the reactional tuberculoid cases have a tendency to relapse and to evolve toward the lepromatous type—through borderline, according to Gay Prieto—and the difference is held to be fundamental.

As for a name for the proposed combined group, no single one is especially advocated. Gay Prieto uses “intermediate or borderline.” The Brazilian authors, who evidently have a distaste for “borderline” because it is foreign to the Portuguese language, list a number of terms that have been used by different authors, but they comment that “inter-polar” merits particular consideration.

As for the histologic features, Gay Prieto recognizes that it is not usual for borderline cases to show both tuberculoid and lepromatous

<sup>1</sup>GAY PRIETO, J. The concept and limits of borderline leprosy. *Internat. J. Leprosy* **29** (1961) 442-429.

<sup>2</sup>SOUZA CAMPOS, N. Contribuição ao estudo clínico da lepra dimorfa. *Rev. brasileira Leprol.* **28** (1960) 61-69 (abstract in this issue).

<sup>3</sup>DE SOUZA, P. R. Contribuição ao estudo histopatológico da lepra dimorfa (“borderline”). *Rev. brasileira Leprol.* **28** (1960) 70-76 (abstract in this issue).

<sup>4</sup>SOUZA CAMPOS, N. Lepra tuberculóide reacional. *Rev. brasileira Leprol.* **8** (1940) 251-263.

<sup>5</sup>WADE, H. W. and RODRIGUEZ, J. N. Borderline tuberculoid leprosy. *Internat. J. Leprosy* **8** (1940) 307-331.

<sup>6</sup>SOUZA CAMPOS, N. and DE SOUZA, P. R. Reactional states in leprosy. Lepra reaction, tuberculoid reactivation (tuberculoid lepra reaction), reactional tuberculoid leprosy, borderline (limitantes) lesions. *Internat. J. Leprosy* **22** (1954) 259-272.

features in the same section. In this connection he cites Alonso and Azulay<sup>7</sup> who—apparently accepting without disagreement the distinction of borderline—emphasized the fact that the association of the lepromatous and tuberculoid elements varies extremely; that it may be necessary to make two or more biopsies to find them both; and that the laboratory is sometimes unable to confirm the diagnosis in cases which clinically are really borderline. On the other hand, the de Souza Campos-Rath de Souza team say nothing on that particular point, only listing (a) the varied histologic findings in cases diagnosed borderline clinically and (b) the varied clinical findings in cases diagnosed borderline histologically.

Gay Prieto also refers to the experience of Convit with the intravenous methylene blue test.<sup>8</sup> Without that test, Convit is quoted as saying, it is often impossible to make the differential diagnosis between reactional tuberculoid and borderline. Convit and associates also showed that different lesions in a given borderline case, and even different parts of a given lesion, may take up the blue coloration, which reveals the parts that have become lepromatous—and, consequently, that multiple biopsies are frequently needed.

Rath de Souza, in his contribution, introduces an observation of interest in the finding that the bacilli in borderline lesions, and in fact those of all forms of leprosy other than lepromatous that are bacteriologically positive, tend to be shorter than those in the leproma. This is ascribed to an unsuitability of the lesion cells of these forms for the full development of the bacilli, due to their "internal biochemistry" which is related to the factors of relative resistance." This is an observation which seems worth elaborating upon, and looking into by other investigators.

As for his opinion that a lesion can be considered borderline only if the bacilli are relatively abundant—although less so than in the leproma—we consider that open to question. If the recognition of borderline is primarily clinical, as it should be, then at one end of the continuum (or "gamut") between simple tuberculoid cases—and, we would say, ordinary reactional tuberculoid cases—there will be seen some so early that they are bacteriologically negative by smear examination, as recognized by Alonso and Azulay and as was the case in the patient recently described by Wade.<sup>9</sup> Furthermore, in such cases the actual lepromatous transformation may not yet have begun, so that histologically only the tuberculoid structure will be found. Toward the lepromatous end of the

<sup>7</sup>ALONSO, A. M. and AZULAY, R. D. Observations upon the borderline form of leprosy. *Internat. J. Leprosy* **27** (1959) 193-201.

<sup>8</sup>CONVIT, J., SISIRUCÁ, A. and LAPENTA, P. Some observations on borderline leprosy. *Internat. J. Leprosy* **24** (1956) 375-381.

<sup>9</sup>WADE, H. W. The first phase of borderline transformation. The so-called "relapsed tuberculoid" condition. *Internat. J. Leprosy* **28** (1960) 105-112.

continuum, of course, there are cases the lesions of which show an abundance of bacilli, as the one "reevaluated" in this issue by Wade and Perrin,<sup>10</sup> clinically unmistakably borderline—and, as pointed out by Meyer, of Carville, more lepromatous histologically than clinically.

We hesitate to argue here against the creation of the proposed composite group, although we fail to see the advantage of grouping true borderline cases—which are less likely to subside spontaneously, and are less responsive to treatment, than reactional tuberculoid—with those of the reactional tuberculoid condition. That would move the line of diagnostic differentiation to the zone between reactional tuberculoid leprosy and tuberculoid "reactivation," which line is not always clear-cut and certain. The matter is one for deliberate consideration and study, which it is to be hoped it will receive before the next international congress.

Another complication is presented in the thoughtful paper on dimorphous macular leprosy by Currie, also in this issue.<sup>11</sup> It is only of incidental interest that, heretofore, it was his practice to refer to those cases as "borderline." He suggests that the transitional cases of macular appearance be included in the "borderline (dimorphous)" group of the Madrid classification, to be designated the "maculoid" variety to indicate that they share the essential histologic nature of the recognized borderline cases and are potentially elevated. To accept this proposal would extend the limits of the borderline group to include clinically indeterminate cases.<sup>12</sup>

Davison<sup>13</sup> does that, including in the "borderline" group macules that are flat but infiltrated and are bacteriologically positive. This practice, fortunately, is not common. Incidentally, he has a point in requiring that borderline lesions must arise in normal skin, and that smears taken from a short distance away must always be negative.

Need one despair of unanimity in this matter "in our day"?

—H. W. WADE

<sup>10</sup>WADE, H. W. and PERRIN, S. R. A case of advanced borderline leprosy. Reevaluation of a case originally reported as lepromatous. *Internat. J. Leprosy* **29** (1961) 460-472.

<sup>11</sup>CURRIE, G. Macular leprosy in Central Africa, with special reference to the "maculoid" (dimorphous) form. *Internat. J. Leprosy* **29** (1961) [A.E.:?] (in this issue).

<sup>12</sup>Gay Prieto, who "rejects" the term "dimorphous" in connection with borderline leprosy, believes that the dimorphous macular condition is merely a transformation phase of the indeterminate form.

<sup>13</sup>DAVISON, A. R. Classification of borderline leprosy. *Leprosy Rev.* **32** (1961) 43-47 (abstract in this issue).