

# Type I reaction

Editorial

In some publications (Lastoria, 1998; Opromolla, 1980, 1994abc, 1995, 1996, 1997, 1999), we have tried to show our point of view in relation to type I reaction in leprosy.

We have the impression there are no down grading or up grading reactions, but only one type of reaction. It is not logical for us that clinically similar manifestations, occurring prior, during or even after treatment, have different connotations.

When a reactional episode is installed, what is commonly observed is that a previous lesion becomes acute, with erythema and edema, no matter if the lesion is a simple area with alteration of sensitivity, or an anesthetic or hypoesthetic macule, or even a well constituted plaque. Concomitantly to this initial acute phenomenon, other reactional lesions are almost always installed, papules or erythematous plaques that can be numerous and may be distributed along the entire tegument.

This way, the number of lesions increases, and other episodes may occur with the appearance of more new lesions. The bacilloscopy seems to be related with the Mitsuda reaction and with the number of episodes. In those cases with a more intense Mitsuda reaction, 7 mm or more, the bacilloscopy is negative during the episode and there is only one episode; in cases in which the lepromin test is less intense or negative, the resistance is lower, there is variable bacilloscopy positivity and the number of episodes is higher. Frequently, when more than one episode occurs, the amount of bacilli decreases in successive episodes, or remain the same, or even increases, depending on patient being on treatment or not. The bacilli that are not destroyed may remain in the tissue as persistent bacilli.

These considerations allow the suggestion that the reactional episode is related with multiplication of bacilli, destruction of bacilli by the immune system or treatment, antigen release and hypersensitivity manifestation that would be traduced as appearance of acute lesions.

Most of the researchers, however, think that there are worsening reactions linked to bacillary multiplication and improving reactions linked solely to hidden antigen, and that for whatever reason would be exposed and give rise to the acute phenomena.

This last interpretation would be more convenient to explain the appearance of lesions after multidrug therapy

(MDT), especially if the diagnosis is done using the response to corticosteroids treatment. Because reactions are acute manifestations, they would respond well to these anti-inflammatory drugs, and would be considered an immunological phenomenon and not the result of bacillary multiplication, and therefore, not a relapse. Recently, Shetty et al. (2001) studied 25 cases of borderline-tuberculoid leprosy that presented new lesions from 1 to 13 years after being released from treatment. Viable bacilli were found in the foot pad of inoculated mice in 48% (12/25) of the biopsies of these cases. Besides, the incidence of viable bacilli was higher (58%) in cases in which the histopathology examination showed reversal reaction evidences.

These results are in accordance to what we think may happen in type I reactions, i. e., these reactions would be the result of persistent bacilli multiplication that if not totally destroyed, will remain in the persistency status.

Dr. Waters (2001), making comments about Shetty's (2001) work in the editorial of the same journal, after referring to a case with tuberculoid lesion on the face, which appeared 40 years after the patients had been apparently cured, admit that the authors presented evidences that viable bacilli can cause relapse in borderline-tuberculoid leprosy, and that these relapses may be associated with reversal reactions.

We also studied a case similar to Dr. Water's (3). It was a case of a patient who presented extensive erythematous-hypochromic flat lesions on the trunk and members, with negative bacilloscopy, and that disappeared after 2 years of treatment with chalmogra oil. More than 40 years later she presented a reactional episode with large erythematous plaques on the entire tegument, with positive bacilloscopy (++++) of lesions, during an unbalanced diabetes mellitus. This was not probably a reinfection because the old lesions showed up, now with a reactional aspect. What must have happened was bacillary multiplication that were maintained as persistent, and this "waking up" of bacilli may well be related to the diabetes and to the patient's age.

Therefore, there are more evidences that the type I reactions are related with *M. leprae* multiplication and that is why the statistics about relapse post MDT treatment will have to suffer a few changes.

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