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Letter to the Editor

A STRATEGY TO IMPROVE THE ML FLOW TEST FOR DETECTION OF ANTI-PHENOLIC GLYCOLIPID-1 ANTIBODIES: REPLY

Dr Parkash in his letter puts forward the suggestion to improve the ML Flow test by adding anti-IgA and anti-IgG to the colloidal dye in order to detect not only IgM, but also IgG and IgA antibodies to the trisaccharide moiety of phenolic glycolipid-I (PGL-I). At first sight, this suggestion may look promising as it may lead to a positive test for more patients. However, there are a number of reasons why we think this is not a viable road to pursue.

Sensitivity and specificity of the test

Many studies have indicated that the antibody response against the trisaccharide moiety of PGL-I is mainly of the IgM type, with IgM titres being much higher than IgG and IgA titres.[1,2] To our knowledge, there is no indication in the literature that the detection of IgG and IgA leads to increased sensitivity. In a study on serum samples from a limited number of leprosy patients, we did not find more patients to be seropositive when combining IgG and IgM ELISA result as compared with only IgM ELISA results (unpublished observations). IgM antibodies are considered to be specific for *Mycobacterium leprae*,[3] whereas Kumar et al.,[4] using an ELISA for the detection of IgG against PGL-I, found high levels (38–44%) of cross-reactivity among TB patients, patients with autoimmune disorders and patients with liver disorders and fever of unknown origin.

All these observations combined strongly suggest that adding the detection of IgG and IgA to the ML Flow test would only slightly (if at all) increase the sensitivity of the test, but could lead to a serious drop in specificity, thus lowering rather than increasing the overall performance of the test.

Use of the ML Flow test

Another point that needs to be taken into account is the field of application of the ML Flow test: as stressed before,[5,6] serology in general and the ML Flow test in particular cannot be used as a single diagnostic test, as the majority of the paucibacillary (PB) patients are seronegative. This is irrespective of whether we test for IgG or IgM.[4,6,7] However, serology is, among other applications, useful for the classification of patients into PB and multibacillary (MB) for treatment purposes. For this purpose specificity is of prime importance to prevent over-treatment.

In conclusion, in our view the addition of anti-IgA and anti-IgG to the ML Flow test will not increase its performance or applicability.

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