Detection of Anti-Toxoplasma Immunoglobulin M in Pregnant Women

Liesenfeld et al. (1) recently published a very interesting article on an old but still often embarrassing problem, the detection of anti-Toxoplasma immunoglobulin M (IgM) in pregnant women. We completely agree with their conclusions, but we would like to add some more comments.

First, the evaluation of IgM detection with a serology kit is easy when the follow-up of patients allows the collection of consecutive sera which definitely confirm either a seroconversion (with the first serum sample being negative) or a persisting negative serology. However, in routine laboratories, biologists are most often faced with the problem of a first serum sample with IgG and IgM, or IgM alone in a pregnant woman without any previous result. The biologist has to give a first reply to the physician, the definitive conclusion coming from the study of a second serum sample 3 weeks afterward, in countries (such as France) where this is routinely done. Thus it is of great importance for the clinical microbiologist to know perfectly well the performance of the kit he or she uses. This can be ascertained only by carrying out comparative studies with previously described tests, even if none of the techniques is the absolute reference since there is no real “gold standard” for IgM detection, as specified by Liesenfeld et al. (1, 2). A World Health Organization reference serum exists for IgG, but not for IgM (3). That is why the words “sensitivity” and “specificity” must be carefully interpreted in these studies. They are not absolute but are related to the reference technique (which again is not a gold standard) used specifically in each study and clearly defined as such. The real medical sensitivity (together with the earliness of detection) and specificity for the diagnosis of acquired toxoplasmosis can be evaluated only with true seroconversions and consecutive negative sera, respectively.

Second, it is true that the information given to a pregnant woman that she has a positive result in an IgM test for Toxoplasma can lead to exaggerated distress, even if successive controls can be performed. We would like to insist on the fact that it is the responsibility of both the physician and the biologist to carefully interpret the results and to discuss together the content of the message to be delivered to the patient. Since no IgM detection kit is absolutely perfect, the clinical microbiologist in a routine laboratory must give not only a reply concerning the test results but also, from a medical point of view, an interpretation concerning the possibility, or not, of infection acquired after the beginning of pregnancy. If this is impossible, he or she should refer the sample to a reference laboratory, which can give more precise information, mainly by comparing the results obtained by different serological methods with different target antigens and antibodies with different kinetics.

This is the only way, to date, to avoid the tragedies that could be induced by false-positive results and/or results indicating persistent (remaining after infection acquired in the distant past) IgM specific for Toxoplasma gondii.

REFERENCES

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Ed. Note: The authors of the published article declined to respond.