SHORT PAPER

IgG Avidity Test for the Diagnosis of Acute *Toxoplasma gondii* Infection in Early Pregnancy

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ABSTRACT

Background: Toxoplasmosis is well known as an important infection in pregnant women. Although many serologic methods are available, diagnosis of early Toxoplasmosis may be extremely difficult. **Objective:** To detect the Toxoplasma IgG antibodies developed at the early stage of infection in pregnant women. **Methods**: 225 pregnant women, who were in the 2^{nd} to 4^{th} month of their pregnancy, enrolled in this study. Anti-toxoplasma IgG, IgM and IgG avidity were evaluated by ELISA method. **Results**: The patients were categorized into three groups as follows: Group A, 124 cases; IgG+, IgM+, 55.1%; group B, 99 cases; IgG+, IgM-, 44%; and group C, 2 cases; IgG -, IgM +, 0.9%. Fifty five percent of the pregnant women had positive IgG and IgM among which 7.1% had low avidity which revealed an active infection in the pregnant women. In the current study, 44% of pregnant women had positive IgG and negative IgM, all of which had high avidity, which is an indication that in our population the level of toxoplasmosis infection is high and most women have had contacts with this parasite before pregnancy. **Conclusion:** In this study, the low avidity test was 7.1% showing that the occurrence of toxoplasmosis infection is still a serious issue. Observation of 45.8% high avidity among group A suggests that either IgM has a high half-life or there is a false positive IgM as a result of rheumatologic disorders. Therefore, avidity test is important in predicting maternal toxoplasmosis which is of value in disease treatment.

Keywords: Acute Toxoplasmosis, Avidity, IgG, IgM, Pregnancy

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