

Avidity and IgE versus IgG and IgM in Diagnosis of Maternal Toxoplasmosis

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Abstract : Infection with *Toxoplasma gondii* can cause serious complications in pregnant women, leading to abortion, stillbirth, and congenital anomalies in the fetus. Definitive diagnosis of *T. gondii* acute infection is therefore critical for the clinical management of a mother and her fetus. This study was conducted on 250 pregnant females in the first trimester who were inpatients or outpatients at Obstetrics and Gynaecology Department at Tanta University Hospital. Screening of the selected females was done for the detection of immunoglobulin (IgG and IgM), and all subjects were submitted to history taking through a questionnaire including personal data, risk factors for *Toxoplasma*, complaint and history of the present illness. Thirty-eight samples, including 18 IgM +ve and 20 IgM-ve cases were further investigated by the avidity and IgE ELISA tests. The seroprevalence of toxoplasmosis in pregnant women was (42.8%) based on the presence of IgG antibodies in their sera. Contact with cats and consumption of raw or undercooked meat are important risk factors that were associated with toxoplasmosis in pregnant women. By serology, it could be observed that in the IgM +ve group, only one case (5.6%) showed an acute pattern by using the avidity test, though 10 (55.6%) cases were found to be acute by the IgE assay. On the other hand, in the IgM -ve group, 3 (15%) showed low avidity, but none of them was positive by using the IgE assay. In conclusion, there is no single serological test that can be used to confirm whether *T. gondii* infection is recent or was acquired in the distant past. A panel of tests for detection of toxoplasmosis will certainly have higher discriminatory power than any test alone.

Keywords : diagnosis, serology, seroprevalence, toxoplasmosis

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