

LETTER TO THE EDITOR ΓΡΑΜΜΑ ΠΡΟΣ ΤΟΝ ΕΚΔΟΤΗ

ARCHIVES OF HELLENIC MEDICINE 2019, 36(4):559–560
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2019, 36(4):559–560

Clinical utility of testing for anti-*Toxoplasma gondii* IgG avidity indices

We read with keen interest an interesting article by Sedigh Ebrahim-Saraie *et al*¹ on *Toxoplasma gondii* seroprevalence and related risk factors in patients with HIV in Iran. In the study, the authors reported the rate of anti-*T. gondii* IgG as 20.7%. No report was given about those who were both anti-*T. gondii* IgG and IgM positive, nor was anti-*T. gondii* IgG avidity test done on those whom were anti-*T. gondii* IgG.

Antibody-based enzyme immunoassay is often the readily available and first test of choice in the diagnosis of toxoplasmosis in most countries. However, there have been difficulties in the clinical applications of these test results, particularly when differentiating acute from chronic toxoplasmosis, and determining the time and risk of severe toxoplasmosis, since both acute and chronic infections occur in different timing and present with different severities. Serological diagnosis of toxoplasmosis is usually achieved by detecting anti-*T. gondii* IgG and IgM. Further to these, the IgG avidity test is an important additional test, routinely performed in most laboratories. When conducted, a low anti-*T. gondii* IgG avidity index indicates acute infection, while a high IgG avidity confirms chronic or reactivated toxoplasmosis. The IgG avidity index cut-off used to dif-

ferentiate acute from chronic toxoplasmosis depends on the kit manufacturers, and they are usually expressed in percentages.²

It is important to note that the presence of anti-*T. gondii* IgM in sera cannot be considered reliable for making a diagnosis of acute toxoplasmosis. The anti-*T. gondii* IgM antibody titer rises from 5 days to several weeks following primary infection, reaching a maximum after 9 weeks. The IgM declines more rapidly than the IgG.² IgG antibodies appear later than the IgM and are usually detectable within 7–14 days of *T. gondii* infection, peaking 3–6 months after the acute primary infection. Later in life, anti-*T. gondii* IgG antibodies are detectable for years and usually persist throughout life.³

In view of these data, it can be recommended that clinicians should adopt IgG avidity testing as adjunctive to differentiate acute primary from chronic toxoplasmosis among those with anti-*T. gondii* IgM positive results, in order to determine the time of infection, grade the severity of infection, ascertain the clinical outcomes of infected persons and initiate prompt therapeutic interventions.

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ΠΕΡΙΛΗΨΗ

Κλινική χρησιμότητα της εξέτασης για έλεγχο των IgG κατά του *Toxoplasma gondii*

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Αρχεία Ελληνικής Ιατρικής 2019, 36(4):559–560

Λέξεις ευρετηρίου: Οροδιάγνωση, Τοξοπλάσμωση

Submitted 21.10.2018

Accepted 28.10.2018

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