

Session: P037 Toxoplasmosis

Category: 7a. Diagnostic parasitology

23 April 2017, 12:30 - 13:30

P0794

| | Vidas Toxo IgM II | Vidas Toxo IgM I | Architect IgM |
|--|---------------------------|---|--|
| Positive IgM, infection <4 months (n=36) | 36 positive | 36 positive | 36 positive |
| Positive IgM, infection >4 months (n=59) | 58 positive 1 negative | 45 positive 10 equivocal | 54 positive 4 equivocal |
| Negative IgM (n=101) | 101 negative | 101 negative | 101 negative |
| Non-specific IgM or false positive (n=14) | 3 positive | 2 positive | 9 positive 4 equivocal |
| Children infected by congenital toxoplasmosis (n=11) | 10 positive 1 negative | 9 positive 1 equivocal 1 négative | 6 unrealised 3 positive 2 negative |

Background: *Toxoplasma gondii* can cause severe lesions in newborns and immunocompromised patients. The screening and the monitoring of toxoplasmic infection is mainly based on serological techniques. The use of specific, sensitive and up to date serological techniques for IgM detection is essential in this field.

Material/methods: The Vidas® Toxo IgM II is a new immune-capture assay. The positive cutoff value used to interpret the results was established at 0.19 without equivocal zone. We compared this new test with 2 others tests: Vidas® Toxo IgM I and Architect® Toxo IgM. We tested 221 human serums from our sample collection, stored at -20°C. We grouped these serums in 3 categories: presence of specific IgM with 1 or more assays (n=106), presence of non-specific IgM or false positive result (n=14) and absence of specific IgM with all tests (n=101). The presence of non-specific IgM or false positive result was determined by analysis of antibodies kinetics. We also defined 3 subgroups for patients with presence of specific IgM with 1 or more techniques: patients with recent infection <4 months (n=36), patients with chronic infection >4 months (n=59) and children infected by congenital toxoplasmosis (n=11).

Results: Results are shown in the following table.

Vidas® Toxo IgM II has a sensitivity of 97.4% and a specificity of 98.1%. The sensitivity of Vidas® Toxo IgM I is lower, at 94.7% but with a specificity of 98.2%. The Architect® Toxo IgM sensitivity is 96.6%, but it has the lowest specificity at 92.0%.

Conclusions: The sensitivity of this test is higher than Vidas Toxo® IgM I and Architect® IgM. However, the specificity is slightly lower than Vidas® Toxo IgM I but higher than Architect® IgM. This study shows that the sensitivity of Vidas® Toxo IgM II is higher in children infected by congenital toxoplasmosis and for patient with chronic infection (> 4 months). This new Vidas® Toxo IgM II with an easier interpretation (only one positive cutoff value) could replace the current Vidas Toxo® IgM I for the diagnosis of toxoplasmosis and it could be used for the diagnosis of congenital toxoplasmosis.