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Poster Session II

Automation of diagnostics

IGG AVIDITY TEST FOR DIAGNOSIS OF TOXOPLASMOSIS: PERFORMANCE OF A NEW FULLY AUTOMATED SYSTEM (LIAISON® XL)

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Objectives For pregnant women the need still exists for a precise and quick diagnosis of toxoplasmosis by serological test in order to identify all the pregnancies at risk of congenital infection to address to prenatal diagnosis or different therapy. On the other hand it is important to exclude acute infection in women with persistent IgM or unspecific IgM antibodies. The LIAISON® platform is a closed system based on cutting-edge technology, fully automated developed by DiaSorin (Saluggia, Italy). On this system all the tests for diagnosis of toxoplasmosis, IgG, IgM and IgG Avidity are internationally employed. The LIAISON® XL, a new fully automated chemiluminescence analyzer with novel technical solutions and components that enhance the system reliability and helps to maximize quality, was developed and launched in 2011 by DiaSorin. In this study we evaluated the performance of the fully automated IgG Avidity CLIA on LIAISON® XL.

Methods A dedicated surveillance study for LIAISON® Toxoplasmosis kits has started on January 2013 and is planned to last over the year at a reference clinical site, Fondazione IRCCS Policlinico San Matteo Pavia, Italy. We collected 441 residual samples for toxoplasmosis. The samples previously tested by IgG , IgM , IgG avidity CLIA (DiaSorin LIAISON® Saluggia, Italy) and by IgG, IgM, IgG Avidity ELFA (bioMérieux Vidas Marcy l'Etoile, France) for Toxoplasmosis were run by new LIAISON® XL. For every patient clinical data were also collected.

Results Out of the 441 samples, 155 showed low, 82 moderate and 204 high avidity index results. One hundred forty five of the 174 low avidity samples had a low avidity also with VIDAS test, 185 out of 204 high avidity and 38 of the moderate. Most of the discordant samples (44) could be recorded as moderate avidity, for 28 discordant samples the result could be explained on the basis of clinical data and therapy. We had only one result with a high avidity in LIAISON® XL and low in VIDAS but the VIDAS value was really close to the intermediate zone.

Conclusions There is a good agreement between the two tests. The preliminary analysis shows adequate diagnostic concordance between LIAISON® XL and comparison methods. A single result should not be used for diagnosis. For Toxoplasmosis results obtained with LIAISON® XL tests are reliable and correspondent to clinical data LIAISON® and VIDAS tests.