

P1389 **Diagnosis of toxoplasmic chorioretinitis: moving towards standardized assays.**

Valeria M.V. Meroni*¹, Antoniazzi Elena Rosa Maria², Martina Prestia³, Suzani Martina⁴,
Francesca Genco⁵

¹University of Pavia, Medical therapy and internal medicine, PAVIA, Italy, ²San Matteo Hospital Foundation, Ophthalmology, PAVIA, Italy, ³San Matteo Hospital Foundation, Structure of Microbiology and Virology, PAVIA, Italy, ⁴San Gerardo Monza Hospital, Ophthalmology, Italy, ⁵San Matteo Hospital Foundation, Structure of Microbiology and Virology

Background: *Toxoplasma gondii* is a major cause of retinal infections.. Clinical signs of Ocular Toxoplasmosis (OT)appear late after the infection on set and may have severe sequelae in immunocompromised hosts and children with congenital infections. Permanent damage of the retina occurs when the infection is not timely treated. First diagnosis is currently based on clinical observation and confirmed by PCR or immunoblotting test. So far the diffused use of hand-made tests lacking standardisation has been limiting the application of molecular assays in routine diagnostic. However commercial, CE marked molecular assays for *Toxoplasma* DNA detection offer now a new tool to face the challenge.

Materials/methods: In the study 53 ocular fluid samples and 21 blood samples were retrospectively tested using *Toxoplasma* ELITe MGB Kit after DNA extraction. The samples were collected between 2010 and 2017 from 55 patients affected by chorioretinitis. Serum samples were tested with IgG, IgM CLIA (Diasorin Saluggia Italia), IgG ELFA (Biomerieux Marcy L'Etoile France).In all suspected seroconversion Toxo IgM ISAGA, Toxo IgG Avidity (Biomerieux Marcy L'Etoile France), IgA Elisa (Diasorin Saluggia Italia) were performed. Comparative IgG IgM Western-Blot (LDBIO Lyon France) was performed on ocular fluid samples and serum when volumes was enough (N=12). Results were compared with the clinical outcome.

Results: Results are summarised in the table. At the end for 27 patients OT was diagnosed .Two of them were positive only in WB. Ameliorations after treatment confirmed the diagnose..

	RT-PCR Results		WESTERN BLOT Results	
	74		12	
	PCR +	PCR -	WB +	WB -
AQUEOUS HUMOR	23	24	7	4
VITREOUS HUMOR	2	4	1	0
BLOOD	0	21		
TOTAL	25	49	8	4

Conclusions: Our data demonstrate that the use of CE-IVD commercial assays like *Toxoplasma* ELITe MGB largely contributes to the standardisation of molecular detection of *Toxoplasma gondii* DNA. Improvements are expected by the introduction of integrated sample-to-result platform like Elite InGenius. In addition the concordance with the clinical outcome supports PCR relevance in the OT

differential diagnosis in ocular fluid. A combined approach based on molecular testing and immunoblotting increase the diagnostic efficiency .