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Usefulness of real time PCR in the diagnosis of herpeticuveitis

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Background and purpose: Herpetic eye infection may have various and severe clinical manifestations, including keratitis and various forms of uveitis. Early diagnosis is of utmost importance for prompt initiation of specific antiviral therapy. Real-time PCR (RT-PCR) is a variant of PCR that allows quantitative measurements of viral load. The purpose of this study is to assess the role of RT-PCR in the diagnosis of herpetic uveitis.

Methods: A total of 44 aqueous humor (AH) samples were collected from patients examined at the department of Ophthalmology, Fattouma Bourguiba University Hospital, Monastir, Tunisia between June 2011 and April 2014. AH sampling was performed for a diagnostic purpose in various forms of uveitis, including anterior uveitis (n=31), acute retinal necrosis (ARN) (n=7), posterior uveitis (n=3), and panuveitis (n=5). Samples were assayed for HSV-1/2, VZV, and CMV by RT-PCR on Rotor-Gene® Q using artus® CR kits (Qiagen, Hilden, Germany).

Results: At least one viral genome was detected in 14/44 (31.8%) patients. HSV was detected in 10 of the positive samples, VZV in 5, and CMV in 1 HIV-infected patient. More than one virus was detected in 2 AH samples, including HSV in both of them. Among the 7 cases of ARN, 3 were caused by VZV and 2 by HSV. A high level of viral load was detected in 7AH samples, including 3 cases of ARN, one case of posterior uveitis, and 2 cases of panuveitis.

Conclusion: HSV was the principal etiologic agent of uveitis in this Tunisian series, followed by VZV. RT-PCR is a reliable tool for diagnosing and evaluating intraocular herpetic infection.

Biography

Salma Mhalla is a medical assistant studying at Monastir's faculty of medicine. She has a master's degree in microbiology on the theme of molecular epidemiology of hepatitis C, which was published in an international journal. She is now pursuing a master on pedagogy in order to become the first professor assistant in Virology in this faculty.

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