( ) R1 ( ) R2 ( ) R3 ( ) PG0 ( ) PG1 ( ) Estagiário (X) Tecnólogo ( )
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PATTERN REVERSAL VISUAL EVOKED POTENTIALS IN PATIENTS WITH MULTIPLE SCLEROSIS

P. Y. Sacai, A. Berezovsky, S.R. Salomão, J.M. Pereira. Clinical Electrophysiology of Vision Lab, Dept. of Ophthalmology, Federal Univ of São Paulo, São Paulo, Brazil Purpose: Visual pathways are frequently involved in Multiple Sclerosis (MS). Some patients with MS have either slight visual disturbances or can be asymptomatic. Pattern reversal visual evoked potentials (VEP) are an objective method to evaluate visual dysfunction in MS. The purpose of this study was to investigate VEP parameters in a group of patients previously diagnosed with MS. Methods: A group of 16 patients (9 females and 7 males) with MS was referred to the Clinical Visual Electrophysiology Laboratory for VEP testing. Visual complaints such as blurring, diplopia, visual field loss, oscillopsia and photopsia were present in 13 patients, while 3 were asymptomatic. Age at testing ranged from 14 to 60 years (mean age=38.9±12years). Pattern reversal VEP was performed monocularly using checkerboard stimuli subentending visual angles of 15´ and 1º with a monitor positioned at 1 m. Three goldcup electrodes were used for the VEP recording: one 2 cm above the inion (Oz - active), one in the forehead (FPz - reference) and one in the vertex (Cz - ground). Latency for the P100 component (ms), and peak-to-peak N75-P100 amplitude (mV) were determined and compared to VEP norms from our lab. Best corrected visual acuity was monocularly measured using the ETDRS chart for distance. The results were compared for the better and worse visual acuity eyes. Results: P100 latency values 15’ and 1º checks were abnormally delayed in 87,5% (14/16) MS patients, including the three asymptomatic patients. Significantly prolonged P100 latencies and smaller peak-to-peak amplitudes were found between the worse and better acuity eyes for both 1° ($T=105.0$, $P<0.001$; $T=120.0$, $P<0.001$) and 15’ ($T=105.0$, $P<0.001$) stimuli. VA scores (logMAR) were highly correlated (Pearson coefficient) with P100 latencies for both the worse ($r=0.65$; $P=0.00895$) and better acuity eyes ($r=0.736$; $P=0.00177$). Conclusions: The majority of MS patients showed prolonged P100 latencies for both check sizes (15’ and 1º). Only 2 patients with visual disturbances had normal VEP latency. The pattern reversal VEP has proved to be useful as an indicator of optic nerve disease in patients previously diagnosed as MS, even in assymptomatic cases.

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