

Abstract

Visual Evoked Potentials in the Detection and Monitoring of Optic Neuritis in Multiple Sclerosis [†]

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Introduction: Visual Evoked Potential (VEP) detects failures in nerve conduction along visual pathways. The aim of this study is to evaluate the VEP as a diagnostic tool for optic neuritis due to MS. **Methodology:** The present study is a retrospective and analytical analysis of 56 VEP patients with treatment-naïve multiple sclerosis and optic neuritis, confirmed with Cranial Magnetic Resonance Imaging (CMRI) and Cerebrospinal Fluid (CSF) oligoclonal band analysis. The data were obtained between January 2017 and January 2022, through reports carried out by the Neurophysiology clinic at Clinanep, using standard visual stimuli (reverse checkerboard pattern). The latency of P100 was considered normal when less than or equal to 117.6 ms and its amplitude when greater than or equal to 5.8 μ V. **Results:** The sample consisted of 56 tests that showed a P100 delay that exceeded 117.6 ms in 34 evaluations and 22 tracings associated with a decrease in amplitude to less than 5.8 microvolts. In optic neuritis, inflammation causes demyelination, reducing the conduction velocity of visual signals, which is detectable as an increased latency or a reduced amplitude explained by damage to axons, indicating impaired visual signal transmission. **Conclusions:** Advances in the standardization of tests strengthen VEPs as a diagnostic tool. Prolonged latency predominates in MS, whereas changes in amplitude are more common in axonal neuropathies.

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