

39. OPTIC NERVE DAMAGE IN MULTIPLE SCLEROSIS

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Introduction. Optic neuritis(ON) is an inflammatory disease of the nervous system. It is usually associated with unilateral eye pain which is exacerbated by eye movement and color perception disturbances. The etiology of optic neuritis in most cases is multiple sclerosis (MS). With that, physicians should keep in mind that patients who present with optic neuritis do not necessarily have, or will develop MS. The patients may suffer from other underlying pathology that should be excluded first. The diagnosis of ON is made clinically, but doctors can also use laboratory methods like cerebrospinal fluid analysis and imagistic methods like magnetic resonance imaging scan to help put the correct diagnosis. When optic neuritis is due to MS, it is usually depicted as Clinically isolated syndrome, which is the primary form of MS in most cases. Using visual evoked potential (VEP) shows us if demyelinating lesions exist in the pathway, by increasing the time of the response from the stimulus. 100 milliseconds after the stimulus is called P100 latency.

Aim of study. Explore whether there is a difference between optic neuritis associated with MS and optic neuritis which is not.

Methods and materials. This study concludes 13 patients, who are aged from 29-65 years old. 6 of them are females and 7 are males. 6 patients are diagnosed with MS, and 7 patients are diagnosed with Neuromyelitis optica spectrum disorders (NMOSD). All of these patients did have visual evoked potential and with these results we try to differentiate optic neuritis that is associated with MS from optic neuritis that is associated with NMOSD, by comparing the P100 latency. The mean P100 value of MS patients is 149.961 ± 9.77 . The mean P100 value of patients with NMOSD is 145.376 ± 15.36 .

Results. There is no statistically significant difference between ON with MS and ON with NMOSD, using VEP $P=0.5428$. On the opposing side, it is well documented that there is a difference in symptoms and signs between ON with MS and ON with NMOSD. The lack of significance can be due to small sample size.

Conclusions. The performed study didn't reveal a statistically significant difference between ON with MS and ON with NMOSD, a more extended study should be performed to establish the value of VEP in the differential diagnosis between ON with MS and ON with NMOSD.