

Do visual-evoked potentials and spatiotemporal contrast sensitivity help to distinguish idiopathic Parkinson's disease and multiple system atrophy?

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A large number of patients with Parkinson's disease were reported to have abnormal visual-evoked potentials (VEPs) and spatiotemporal contrast sensitivity (STCS) suggesting dopaminergic deficiency in the visual pathway, probably the retina. Until now, VEPs and STCS have not been studied in multiple system atrophy (MSA). We investigated 12 patients with idiopathic Parkinson's disease (IPD) and 12 patients with MSA. The age medians were 64.5 years for IPD and 63.5 years for MSA. None of the patients showed any ocular disease that could interfere with the results. Check board VEPs and STCS measurements to horizontal sinusoidal gratings were evaluated. Statistical analysis was performed, including Student's t test and two- or three-way analysis of variance. A significant inter ocular difference in spatial contrast sensitivity was observed in IPD, which was not present in MSA. VEPs were not delayed in MSA, whereas latency of the major component and the second negative deflection were increased in IPD. VEPs and STCS measurements might provide useful help for distinguishing IPD from MSA.