PROGRESSIVE MULTIPLE SCLEROSIS PREDICTS EPISODIC MEMORY IMPAIRMENT AFTER ONE YEAR

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Abstract

Background

Cognitive impairment, fatigue and depression are common in patients with multiple sclerosis (MS). However, it is not clear whether a positive history of relapses and a progressive clinical course of MS predicts a decrease in these symptoms.

Objectives

We aim to investigate the relationship between 1-year outcome changes in cognition, fatigue, and depression on the one hand and both a history of relapses and a progressive course of MS on the other.

Methods

The study included 88 participants (22 healthy controls [HC] and 22 patients each with relapsing-remitting MS [RRMS], primary progressive MS [PPMS], and secondary progressive MS [SPMS]). For group comparison, an analysis of covariance (ANCOVA) was used. Factors included history of a progressive course [yes, no], history of relapses [yes, no]. We administered the BICAMS and 3 additional tests (Paced Auditory Serial Addition Test, Block Design Test, Controlled Oral Word Association Test [COWAT]) to construct a highly reliable composite score of cognition.

Results

Positive history of a progressive MS course was associated with impairment in episodic memory over the course of one year (partial $n2$ =0.054, p = 0.034). Moreover, participants with a progressive course showed a non-significant trend for increases in depression (partial $n2$ = 0.034, p = 0.097). Past relapses were non-predictive of any outcome changes over a 1-year period after accounting for covariates.

Conclusion

Our results provide first evidence that a progressive MS course in the past is predictive of decline in episodic memory and at trend level in depression.