Impact of Natalizumab treatment on fatigue, mood and aspects of cognition in relapsing-remitting MS

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Background/Objective: Fatigue, cognitive and affective disorders are relevant symptoms in Multiple Sclerosis (MS). The treatment with Natalizumab has a positive effect on physical disabilities in patients with RRMS. Some studies describe improvements in cognition and fatigue over one year of treatment. Only little is known about longer treatment effects especially on fatigue, but also on cognition and mood. Therefore the present prospective open label observational study investigates the effect of Natalizumab on fatigue, attention and depression over a treatment period of two years.

Methods: 52 patients with RRMS (male=11, female=41; mean age: 33.9+9.1 years) underwent a comprehensive neuropsychological assessment, consisting of different tests of attention (TAP: alertness, divided attention, flexibility, SDMT, PASAT), fatigue (WEIMUS, FSMC) and depression (ADS-L). The assessments occurred immediately before the first administration of Natalizumab, after one and two years of treatment.

Results: Significant improvements were found in aspects of attention and depression from baseline to follow-up 1 (alertness: reaction time (RT) cued, p=0.02; divided attention: visual RT, p=0.02; SDMT: p=0.02; ADS-L: p=0.047) and from baseline to follow-up 2 (divided attention: visual RT: p=0.000; errors, p=0.01, omissions, p=0.05; flexibility: RT, p=0.05; SDMT: p=0.01; ADS-L: p=0.02). Up to know no significant changes were detected in fatigue probably because of the small sample size especially in the second year of treatment (WEIMUS: N=19, FSMC: N=7).

Conclusion: The results show a positive effect of Natalizumab on attention in patients with RRMS and for the first time also in depression after two years of observation and support the efficacy of the treatment over two years. More research is needed for fatigue.

Biography
Kunkel A has completed her PhD in 1999 at the Humboldt-University in Berlin, Germany in the field of motor recovery in chronic stroke patients (Constraint-induced movement therapy). From 1999 to 2001, she completed a secondary education as Clinical Neuropsychologist. Since this time she works up to three years in the neurological rehabilitation and since 15 years in the area of acute neurology. During this time, she began her research in patients with Multiple Sclerosis. For almost 5 years, she is the leading Neuropsychologist in two neurological partner hospitals (Dept. of Neurology Asklepios Fachklinik Teupitz/Lübben).

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