Quantitative Assessment of Recovery from Motor Hemineglect in Acute Stroke Patients.

Abstract:
Background and Purpose: Motor hemineglect is characterized by an underutilization of one side of the body. It is a higher-order motor disorder that resembles hemiplegia although being substantially different from it due to a preserved motor output system. Its role for poststroke recovery is still unclear. Methods: We studied 52 patients presenting with acute hemiparetic stroke over the first 7 days after symptom onset. Nineteen patients had unilateral motor hemineglect. Impairment was clinically assessed with the European Stroke Scale and a multifactorial motor score. It was further assessed quantitatively, as overall arm activity was measured continuously by Actiwatches. Lesion volumes were measured morphometrically within 24 h on perfusion- and diffusion-weighted magnetic resonance images and on average on day 9 by T(2)-weighted magnetic resonance imaging. Results: Patients with motor hemineglect were characterized by significantly reduced initial arm activity in comparison to patients without motor hemineglect. This was paralleled by larger brain lesions in the patients with motor hemineglect. Patients with motor neglect either recovered virtually completely (5 cases; 2/5 left hemisphere; 3/5 treated with recombinant tissue plasminogen activator, rt-PA) within 7 days or did not improve at all (14 cases; 3/14 left hemisphere; 3/14 rt-PA treated). Conclusion: Our data reveal a high
incidence of motor hemineglect in patients with acute stroke. They further show that these patients are more severely compromised than those without motor hemineglect. A rapid and near complete recovery was observed in about one fourth of the motor hemineglect patients and may be related to involvement of the left hemisphere or to therapy with thrombolysis. Copyright (c) 2006 S. Karger AG, Basel.