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A randomized trial of memantine as treatment for spasticity in multiple sclerosis.
Mehta LR, McDermott MP, Goodman AD, Schwid SR.
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Abstract: We report the results of a single center randomized, double-blind, placebo-controlled, parallel group trial of memantine in adults with multiple sclerosis and spasticity conducted over 12 weeks. Eligible MS patients had to have an Ashworth spasticity rating of 2 or higher in at least one lower extremity muscle group. Subjects were randomized to receive either placebo or memantine 10 mg twice a day. The primary outcome measure for efficacy was the change in Ashworth Spasticity Scale Score. Although well tolerated, memantine treatment did not demonstrate efficacy in treatment of spasticity in this 12-week small exploratory study.
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Patti F, Pappalardo A, Longo L et al. Effects on disability of inpatient versus outpatient rehabilitation for people with multiple sclerosis: a randomized study [abstract]. Int J MS Care 2010; 11:43.

Introduction In recent years, interest has grown in neurorehabilitation for people affected by multiple sclerosis(MS). It has been clearly demonstrated that neurorehabilitation can reduce disability and improve quality of life in MS. Rehabilitation settings include home-based, hospital inpatient, hospital outpatient, and ambulatory-based services. The aim of this study was to compare the effects of two different neurorehabilitation settings, inpatient and outpatient, on disability in MS patients.
Methods A randomized controlled trial was conducted involving patients with progressive and relapsing MS who were referred to the Multiple Sclerosis Center of Catania University, Italy. We selected 90 patients, but the randomization was carried out for only 72 patients, because 8 did not join the study, 6 refused the hospital setting, and 4 had concomitant diseases. Of the 72 patients, 24 were randomly assigned to the inpatient treatment group (Group A), 24 to the outpatient treatment group (Group B), and 24 to the control group (Group C). The three groups were well matched for age, disease duration, and severity of disability, as measured by the Expanded Disability Status Scale (EDSS) and the Functional Independence Measure (FIM). Patients in Groups A and B were treated for 6 consecutive weeks, 5 days a week. Patients in Group A were treated twice a day, in the morning and in the afternoon; patients in Group B were treated once a day, in the morning. Patients in Group C did not receive rehabilitative therapy and were placed on the waiting list. All therapists were previously trained in order to administer homogeneous treatment. Each rehabilitative program was tailored to the individual on a multidisciplinary basis. The rehabilitative plan was created before starting treatment with specific ad hoc meetings including the patient, neurologist, physiatrist, physical therapist, speech therapist, occupational therapist, and psychologist. All patients were evaluated at enrollment (T0) and at discharge after 6 weeks (T1). FIM variation was used as an outcome measure. All statistical analyses were performed using the Wilcoxon signed rank test In addition, patients were asked for their assessment of the effects of treatment (subjective improvement vs. no improvement).
Results In the two treatment groups, the mean ± SD total FIM score increased from 91.0 ± 10.3 to 98.3 ± 15.5 in Group A (P = .01) and from 89.8 ± 20.9 to 98.7 ± 17.4 in Group B (P < 0001). In Group C, total FIM score was virtually unchanged (from 90.8 ± 14.9 to 90.7 ± 14.9). The score for the subitem self-care increased significantly in both Group A (27.0 ± 4.8 to 30.7 ± 6.1; P = 0004) and Group B (28.2 ± 9.2 to 31.8 ± 7.8; P < .0001). The score for the subitem mobility increased from 12.0 ± 3.7 to 14.6 ± 4.0 in Group A (P = .0006) and from 12.4 ± 5.9 to 15.4 ± 4.4 (P = .0003) in Group B.

Moreover, in both treatment groups, each patient attributed his or her own subjective improvement to the rehabilitative treatment.

Conclusion Both inpatient and outpatient neurorehabilitation had a positive impact on disability in MS patients. Benefits were observed in activities of daily living such as self-care and mobility. Despite the greater amount of rehabilitative therapy in the inpatient setting, no statistically significant differences were found between outpatients and inpatients in terms of functional independence.