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Brief Report

Pilot study of H₂ therapy in Parkinson's disease: A randomized double-blind placebo-controlled trial

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Abstract

Background

Oxidative stress is involved in the progression of Parkinson's disease (PD). Recent studies have confirmed that molecular hydrogen (H₂) functions as a highly effective antioxidant in cultured cells and animal models. Drinking H₂-dissolved water (H₂-water) reduced oxidative stress and improved Parkinson's features in model animals.

Methods

In this a placebo-controlled, randomized, double-blind, parallel-group clinical pilot study, the authors assessed the efficacy of H₂-water in Japanese patients with levodopa-medicated PD. Participants drank 1,000 mL/day of H₂-water or pseudo water for 48 weeks.

Results

Total Unified Parkinson's Disease Rating Scale (UPDRS) scores in the H₂-water group (n=9) improved (median, -1.0; mean±standard deviation, -5.7±8.4), whereas UPDRS scores in the

placebo group (n=8) worsened (median, 4.5; mean±standard deviation, 4.1±9.2). Despite the minimal number of patients and the short duration of the trial, the difference was significant ($P<0.05$).

Conclusions

The results indicated that drinking H₂-water was safe and well tolerated, and a significant improvement in total UPDRS scores for patients in the H₂-water group was demonstrated. © 2013 *Movement Disorder Society*

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