

Repetitive transcranial magnetic stimulation (rTMS) combined with cognitive training is a safe and effective modality for the treatment of Alzheimer's disease: clinical experience.

Rabey JM^{1,2}, Dobronevsky E^{3,4}.

Author information

Abstract

Alzheimer's disease (AD) is the most common type of **dementia** among the elderly. Common treatments available and non-pharmacological interventions have their limitations, and new therapeutic approaches are critically needed. **Transcranial magnetic stimulation (TMS)** is a non-invasive technique that generates an electric current-inducing modulation in cortical excitability. The previous clinical trials showed that combinations of rTMS and cognitive training (rTMS-COG), as provided by the NeuroAD medical device system, offer a novel, safe, and effective method improving mild-to-moderate AD patients. In this article, we present our experience with rTMS-COG treatment, in clinical settings, of 30 mild-to-moderate AD patients that received rTMS-COG commercial treatments in two clinics for 1-h daily sessions, 5 days per week, for 6 weeks (30 sessions). Five patients returned for a second treatment. ADAS-Cog and MMSE scores were measured pre- and post-treatments. The main analyses were conducted on patients who received 1 treatment (n = 30). Data received from the five returning patients were analyzed separately. The effect of rTMS-COG treatment was statistically significant regarding both ADAS-Cog (-2.4 point improvement, PV <0.001) and MMSE (+1.7 points improvement, PV <0.001) scores. About 80 % of patients gained some cognitive improvement following NeuroAD treatment, with more than 60 % improving by more than two points, for a minimum of 9 months. The Neuronix NeuroAD System was shown to be a safe and effective non-invasive modality for cognitive improvement of Alzheimer patients, with measurable outcomes lasting, in some of them, for up to 1 year, following completion of the 6-week daily intervention course (a carryover effect).

KEYWORDS: Alzheimer's Disease Assessment Scale-cognitive; Alzheimer's disease; Cognitive training; **Dementia**; Mini-mental state examination; rTMS

PMID: 27631152 DOI: [10.1007/s00702-016-1606-6](https://doi.org/10.1007/s00702-016-1606-6)

[PubMed - in process]



PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)