

Safety And Usability Of Novel Repetitive Transcranial
Magnetic Stimulation In Alzheimer’s disease
And Mild Cognitive Impairment

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Novel BrainStim-100 rTMS showed no serious adverse events occurred during 48 person-weeks of treatment. Treatment adherence was 100%, with no safety-related dropouts. Participants rated the device as easy to use and comfortable.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Repetitive transcranial magnetic stimulation (rTMS) is a promising non-invasive neuromodulation therapy for cognitive decline. However, ensuring the safety and usability of new devices is critical for clinical integration in the older adults. This study evaluated the safety and user-friendliness of the BrainStim-100, a novel rTMS system, in Alzheimer’s Disease (AD) and Mild Cognitive Impairment (MCI). 	Twelve participants (aged 65-80) with MCI or early-stage AD were enrolled. The intervention consisted of 12 sessions (3 times per week for 4 weeks) of rTMS using the BrainStim-100. Each session involved 20 minutes of stimulation (Mode 4). The primary outcome was the occurrence of adverse events (AEs), including headaches, dizziness, and scalp discomfort. Secondary outcomes included device usability and participant’s satisfaction assessed via a structured survey after the 4-week protocol. 100% Completed (12/12) Completed 12 (100%) Withdrawn 0 (0%)  All participants completed the 4-week study.	Throughout the 48 total person-weeks of intervention, no serious AEs were reported. Specifically, common rTMS side effects such as persistent headache, dizziness, or syncope were entirely absent. Minor scalp sensation during stimulation was well-tolerated by all participants. The usability survey revealed high satisfaction scores, with participants reporting the device as "easy to use" and "comfortable during stimulation." All 12 participants (100%) completed the full 4-week protocol without any dropouts due to safety concerns.	The BrainStim-100 rTMS device demonstrated an favorable safety profile and acceptable usability for older adults with MCI. These findings provide a preliminary clinical basis for further large-scale trials to evaluate the long-term therapeutic efficacy of this device in dementia care. Mild headache1 (8.3%) Transient dizziness1 (8.3%) 012 Participants, n  All events were mild and resolved without sequelae. No serious adverse events occurred.	1. GonzaloM.Rojas, 2018, Study of Resting-State Functional Connectivity Networks Using EEG Electrodes Position As Seed 2. YoungHeeJung,MD,PhD, 2024, Effectiveness of Personalized Hippocampal Network–Targeted Stimulation in Alzheimer Disease ARandomizedClinicalTrial 3. Effectiveness of Personalized Hippocampal Network-Targeted Stimulation in Alzheimer Disease A Randomized Clinical Trial 4. Marra, Hellen Livia Drumond, et al. "Transcranial magnetic stimulation to address mild cognitive impairment in the elderly: a randomized controlled study.* Behavioural neurology (2015). CONTACT ceo@remedbs.com hoowon@chosun.ac.kr orchis333@gmail.com  REMED BrainStim  GARD 광주치매코호트연구단   ALZHEIMER'S ASSOCIATION  AAIC>26