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Long-term real world data on Transcranial Pulse Stimulation in Alzheimer´s patients

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Abstract

Background:

Transcranial Pulse Stimulation (TPS) is a new therapy that uses shockwaves for the treatment of Alzheimer´s Disease (AD). Recently, our group published short term clinical results after the first treatment cycle of 2 weeks (Cont et al. 2022). Here we analyze long term results.

Methods:

A consecutive number of eleven pilot TPS-treated AD-patients was initially examined. All patients received 4Hz TPS of about 6000 pulses of 0.2 mj/mm² (navigated bifrontally, biparietally, bitemporally and praecuneus) using the Neurolith System (Storz Medical). After the initial treatment cycle of 6 session over 2 weeks patients were planned to receive monthly booster sessions. Safety data and numerous cognitive scores were assessed (e.g. ADAS, MMST, MoCA) over 5-12 months.

Results:

Initial treatment was very well tolerable with low number of only transient side effects. Short term effects on cognition showed significant improvement in the ADAS score. Interim analysis of long term effects will be further presented.

Discussion / Conclusion:

These pilot results confirm the recently published results from Austria with respect to low side effects and extent of cognitive improvement on the short term.

More extensive long term assessments need to be performed in larger groups. Prospective controlled trials would be the next step to show the efficacy of this new technique.

Research Category and Technology and Methods

Clinical Research: 13. Other Brain Stimulation Technology

Keywords

Transcranial Pulse Stimulation (TPS), Alzheimer's Disease, real-world data, Neuromodulation