Biomarkers Predictors of Memantine Sensitivity in Patients with AD

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TIME INVOLVED: Six visits over a 30-week period

DESCRIPTION: Memantine is an FDA-approved, well-tolerated medication that has been used to treat Alzheimer's Disease (AD) for many years. Everyone in this study will receive memantine therapy, using the recommended dose of memantine, for 24 weeks. We know that memantine benefits some patients affected by AD, but we can't tell in advance which patients will or will not benefit. This study is designed to assess whether we can use EEG to predict which patients will most likely benefit from memantine. We reported that a single "test dose" of memantine produces a change in brain activity – measured by EEG - in both healthy adults and psychiatric patients. We want to learn if these EEG changes can be used as signal ("biomarker") that memantine is active within the brain and thereby might be beneficial. In this study, we will determine whether the EEG response to a "test dose" of memantine can be used to predict which patients with AD will be most vs. least sensitive to the clinical benefits of this medication over a 24-week treatment period. Clinical, cognitive, and genetic characteristics will be assessed during the screen visit. Subjects will then undergo EEG, EMG and cognitive testing during 2 test sessions, one week apart. After that, participants will receive 24 weeks of memantine treatment, and memory tests will be repeated after 8, 16 and 24 weeks.

REQUIREMENTS: Age 50-83 with diagnosis of AD; MMSE 10-22 or MOCA 15-24 (we will test these); no previous treatment with memantine. Participants must be willing to undergo (non-invasive) EEG and EMG, one blood test and cognitive testing and have a caretaker or study partner willing to accompany them to visits. Eligible subjects will receive up to $390 for their time.