

Poster presentation

## Repetitive transcranial magnetic stimulation (rTMS) in older versus younger depressed patients

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### Background

The aim of the study is to examine whether rTMS is associated with different rate of response in treating older and younger depressed patients. Multiple antidepressant resistant depressed patients who failed to demonstrate an antidepressant response to an adequate trial were recruited to participate in the study.

### Material and Methods

Patients who were 65 years or older were treated openly with rTMS while continuing to take the same antidepressant for the duration of rTMS course (to avoid the risk of withdrawal). Patients younger than 60 years of age were withdrawn from their antidepressants at least two weeks before starting rTMS treatment. High frequency rTMS was administered to the Left frontal cortex for a period of 10 working days. rTMS intensity was set similarly for both groups at 110% of motor threshold and 20 trains of 10 Hz stimulation were delivered with train duration of 8 seconds at an interval of 52 seconds. Eight patients thus far have completed their treatment, as part of an ongoing investigation. Four were older than 65 years with a mean age of 73 years (range 67–80 years). Four patients were younger than 60 years of age with a mean age of 44 years (range 30–56 years).

### Results

One of the elderly depressed patients showed partial improvement [with HAMD dropping from 27 to 14 (48%) while BDI remained unchanged during the course of treatment], while 3 showed no change in their rating scales (mean HAMD and BDI of 22 and 25 at baseline and 19 and 29 at end of study respectively). Of the five younger patients, 1 responded (with the HAMD and BDI

scores dropping from 23 and 33 at baseline to 11 and 14 at end of the study respectively). A second patient showed partial improvement (HAMD dropped by 33%). The remaining 2 showed little or no change in their mood rating scores between baseline and end of study.

### Discussion

All patients tolerated the TMS well and no evidence of worsening in their anxiety or memory scores were detected. The 1 patient that responded has been receiving bi-weekly maintenance TMS and has been doing very well for the last 9 months. In conclusion, rTMS appears to be well tolerated in both age groups. Younger depressed patients appeared to respond better than older patients, controlled studies with larger numbers are needed.