

Does having traits of Borderline-Personality Disorder affect the likelihood of response to rTMS for Depression?

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Introduction

Individuals with Borderline Personality Disorder (BPD) **often do not respond to antidepressants** or psychotherapy.

We investigated whether **co-morbid BPD trait severity** impacts repetitive **Transcranial Magnetic Stimulation (rTMS) outcome** for **resistant depression**.

Method

Patient Exclusion criteria:

- Patients who had received < 15 sessions
- Patients who had a baseline PHQ-9 of 9 or less
- Patients who had trialled more than one protocol

Patient Characteristics:

- A retrospective chart review of 94 patients was analysed using multiple regression (M=46, F=48)
- Patient ages ranged from 16-82 (mean age= 43.5 years, standard deviation = 4.93)

Psychometrics:

- Depression was measured with the PHQ-9 and all patients had baseline score > 9, indicating a Depressive Disorder. Mean baseline PHQ-9 score = 19.24, SD = 4.83, range = 10-27.
- BPD traits were measured with the SCID-BPD (self-report), score range 0-18. Baseline SCID-BPD mean score = 9.03, SD = 4.59 and range = 0-18.
- Psychometrics were gathered from the Smart TMS clinical data base.

Variables:

- The dependent variable was remission
- The independent variables included: baseline PHQ-9, SCID-BPD score, number of sessions, age and sex.

Procedure:

The intervention administered was continuous Theta Burst Stimulation **over** the right DLPFC (40 seconds, 600 pulses) followed by high frequency 10Hz stimulation over the left DLPFC (20 minutes, 3200 pulses), (minimum 15 sessions).

Mean session number = 25.39, SD = 10.19 and range = 15-80.

44 patients (47%) went into remission (PHQ-9 < 10).

Results

A multiple regression was performed to ascertain if these variables predict the likelihood of remission.

Collectively, the IVs were unable **to predict remission** ($F(5, 88) = 1.52, p = 0.19, R^2 = 0.08$). **Only** number of sessions significantly predicted **remission** ($t = 2.30, p = .024$).



Conclusion

The severity of co-morbid BPD traits **does not predict rTMS treatment outcome**. TMS may be relatively effective for depressed patients with co-morbid BPD.

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