

EFFICACY OF RTMS OF THE DORSOMEDIAL PREFRONTAL CORTEX ON BINGE-PURGE BEHAVIORS IN REFRACTORY ANOREXIA AND BULIMIA NERVOSA: A CASE SERIES

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rTMS is currently being explored as a potential adjunctive treatment for anorexia and bulimia nervosa. Previous studies have found, at best, modest efficacy for rTMS in this setting using the conventional target in the dorsolateral prefrontal cortex (DLPFC). However, neuroimaging studies suggest that the dorsomedial prefrontal cortex (DMPFC) may be more central to inhibiting impulsive thoughts and behaviours such as binge and purge episodes. We have previously reported serendipitous rapid, complete, and durable remission of binge and purge behaviours in a patient with severe bulimia nervosa who was undergoing rTMS of the DMPFC for comorbid major depression (Downar et al., 2012). Here we extend this finding in a larger case series of 15 patients with either anorexia or bulimia nervosa and bingeing and purging behaviours refractory to medications and therapy despite several years of treatment. MRI-guided rTMS of the DMPFC (10 Hz stimulation, 120% resting motor threshold, bilateral, 3000 pulses per hemisphere) achieved full remission from binge and purge episodes in a majority of patients, with parallel improvements in mood and anxiety symptoms. Patients with BMI in the normal range showed a more robust response to treatment. Individual cases also spontaneously reported improvement in comorbid impulse control disorder symptoms, such as kleptomania. Individuals with comorbid obsessive-compulsive disorder (OCD) also reported marked improvements in these symptoms. A subset of patients with lower BMIs showed minimal response. rTMS of the DMPFC may represent an effective adjunct to conventional treatment for binge-purge behaviours. A randomized controlled trial of this approach may be warranted.