

rTMS treatment in a patient with comorbid MDD and PTSD: a case report

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Background

Comorbidity between Post-traumatic stress disorder (PTSD) and major depressive disorder (MDD) is common. Over half of patients (52%) with PTSD also meet criteria for MDD. Repetitive transcranial magnetic stimulation (rTMS) was approved by the U.S. Food and Drug Administration in 2008 and broadly used in MDD patients treatment. But the efficacy and safety using rTMS in the patients with PTSD didn't get approved yet.

Aims & Objectives

This case report article aims to present the safety and efficacy of rTMS in a patient with comorbid MDD and PTSD.

Methods

A 43-year-old, female merchant experience a life-threatening traffic accident which contributed to left ankle ligament injury and latterly was diagnosed PTSD and MDD by DMS-5 criteria. She failed in medication treatment of PTSD and MDD and her symptoms even got worsening. Consequently, rTMS was indicated for her refractory MDD. High-frequency rTMS of left dorsolateral prefrontal cortex was performed to her for total 20 sessions.

Results

After 20 rTMS treatments, the 17-item Hamilton Depression Rating Scale (HAM-D-17) score went from 22 at baseline to 9, the Impact of Event Scale-Revised (IES-R) score went from 45 to 20, and the Work and Social Adjustment Scale (WSAS) score went from 25 to 5. Two weeks after the final rTMS, HAM-D-17, IES-R, and WSAS were, 6, 4, and 3, respectively. Both PTSD and MDD symptoms had much improvement, without significant side effect during this therapeutic session.

Discussion & Conclusion

rTMS is a new, no-invasive technique used in mental disorders, but there were inconsistent frequency, area and outcomes of using rTMS for MDD comorbid with PTSD. The neurobiological mechanisms between the co-occurrence of PTSD and MDD may differ from MDD or PTSD alone. Through our clinical observation, rTMS appears safe and effective for MDD comorbid with PTSD. But further research with a large sample is warranted.