Key Words: transcranial magnetic stimulation, major depressive disorder, bereavement

Bereavement During a Course of TMS for MDD: A Case Report

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ABSTRACT ~ ***Objective:*** *A patient with major depressive disorder (MDD) was receiving transcranial magnetic stimulation (TMS). A little over halfway through the course the patient was bereaved and experienced normal sadness. Our objective is to describe the tracking and outcome of this common emotionally distressing event.* ***Method:*** *Routine assessments conducted at the centre include the six-item Hamiton depression rating (HAMD6) scale, the Clinical Global Impression—Severity (CGI-S) scale, and the Subjective Depression Scale (SDS6). In addition, the Daily Sadness Scale (DSS) is applied at each treatment day; this is a single question asking how much sadness/depression is being experienced.* ***Results:*** *On the 19th treatment day, the patient was bereaved and experienced appropriate sadness. The pathological state (MDD) resolved, as reflected by changes in the psychometric tools. Following the death, normal sadness emerged and lessened over a few weeks.* ***Conclusion:*** *This case illustrates that while TMS can effectively treat MDD, it does not prevent the emergence of sadness in uncomplicated bereavement.*
Psychopharmacology Bulletin. *2025;55(2):100–103.*

Introduction

We are reporting the case of a patient who experienced bereavement during a course of transcranial magnetic stimulation (TMS) for an episode of major depressive disorder (MDD), and describe the tracking and progress of the pathological and normal/customary symptoms.

Case Vignette

A middle-aged female teacher in a stable relationship, who was the mother of a young adult, had suffered episodes of MDD for three decades. She had been treated with a range of antidepressant medications with limited success.

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She suffered a further relapse and was again treated with antidepressant medication, also with little relief. She was referred for a course of 35 daily treatments of TMS. On the 19th day a close relative died and the patient's MDD was complicated by normal grief. The aim of this paper is to describe the patient's progress over the 35 days of treatment.

Method

Standard TMS was provided with a MagPro R30 device (MagVenture; Lucernemarken 15, DK-3520 Farum, Denmark) and a figure-of-eight coil. Stimulation was applied to the left dorsolateral prefrontal cortex at 10 Hz, 110% RMT, 4s trains and 75 trains per session.

Assessment of the symptom burden of those receiving TMS is most accurate when multiple instruments are employed.[1] Accordingly, our facility routinely administers four assessment tools: 1) the six-item Hamilton Depression Rating Scale (HAMD6)–this primary diagnostic tool lists scores of $\leqslant 4$ as indicating remission[2] and > 4 as indicating partial relapse/relapse,[3] 2) the Clinical Global Impression—Severity (CGI-S)–a secondary objective tool for which scores of < 2 indicate remission and > 2 indicate relapse,[4] 3) the six-item Subjective Depressive Scale (SDS6)–a companion to the HAMD6 developed and validated by the treating group,[5] and 4) the Daily Sadness Score (DSS)–which the treating group is working to validate at the time of writing—it is a means of closely following subjective experience over time, designed for use in both normal and pathological states.

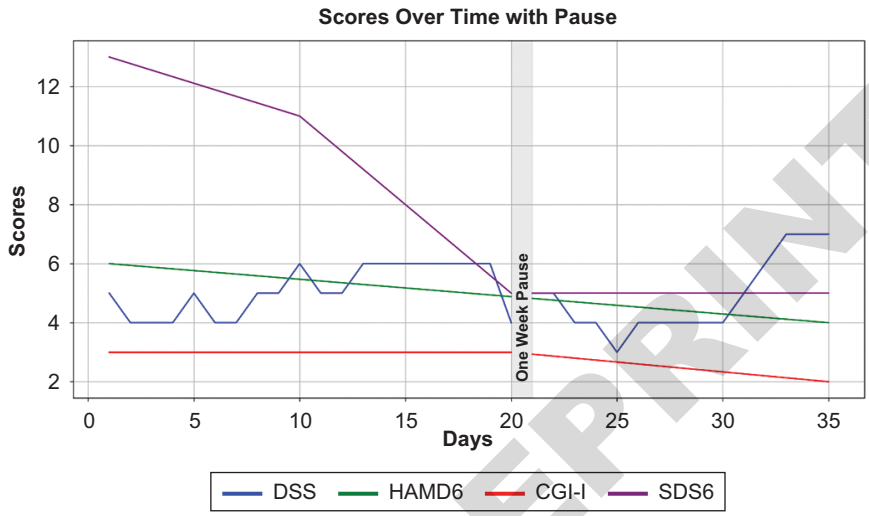
The SDS6 score increases with worsening MDD symptomatology. The DSS, unlike the other instruments, is administered daily (rather than episodically). It is comprised of a single question: "On a scale of 1 to 10, how are you feeling today? A score of 10 means you are feeling neither sad nor depressed". Thus, the higher the score, the less sadness/depression is being experienced. At our facility the HAMD6 is administered on treatment days 1 and 35. The SDS6 and the CGI-S are administered on days 1, 10, 20 and 35. The patient provided a signed agreement for these case details to be published.

Results

The events of this case are graphically depicted in Figure 1. From day 1 to 35, the HAMD6 fell in accordance with a favourable response. Its subjective companion, the SDS6, fell from day 1 to day 10, and then further to day 20. The CGI-S remained stable from day 1 to day 20, but at a relatively low score (3). The DSS varied slightly in the first days of treatment but was stable from 12 to 19. On the 19th day of treatment,

FIGURE 1

Psychometric Scores Over a Course of TMS for MDD, Interrupted by a Bereavement



a close relative of the patient died. On the 20th day the DSS score fell, indicating consequent sadness.

The patient took a one week break from treatment to attend to bereavement matters. She returned and the 21st to the 35th daily treatments were provided. On day 35, both the HAMD6 and CGI-S scores were at MDD remission levels. The DSS fell until the 25th day of treatment (indicating increasing subjective sadness), after which it increased (indicating decreasing sadness) and by the 32nd day of treatment, was above the admission score.

Discussion

We propose this unusual case involves two concurrent processes, an episode of MDD, which responded to TMS treatment, and the grief of bereavement, which suddenly arrived on the 19th day of treatment and improved with routine emotional support.

The first process was monitored by the HAMD6, CGI-S, and the SDS6. The second process was monitored by the DSS. The death occurred at the 19th day of treatment—by which time significant treatment for MDD had been delivered. The DSS indicated increased sudden sadness/depression the day after the death (when the assessment tools were indicating the pathological condition was improving) and remained low for almost three weeks before rising to slightly above the admission level.

Conclusion

The DSS plots the progress of sadness through uncomplicated bereavement. This case is important as it illustrates that TMS has the capacity to resolve the pathological state of MDD,[6] but does not prevent the sadness of bereavement. This differential response, although comes as a surprise, might give kudos to the idea that bereavement-related grief and major depression, despite overlapping symptomatology, remain distinct and distinguishable phenotypes[7] That said, a modicum of evidence supports efficacy of neuromodulation for complicated/morbid grief.[8] ✤

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