

CONCLUSION: Sustained and clinically meaningful TD improvements were observed with VBZ, regardless of primary psychiatric diagnosis. VBZ was generally well tolerated and no notable changes in psychiatric status were observed.

Funding Acknowledgements: Supported by Neurocrine Biosciences, Inc.

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Failure to Do Maintenance Therapy After Completion of Transcranial Magnetic Stimulation Treatment Is a Cause of Relapse of Depression in MDD Patient

Sitwat Malik, MD¹; Azfar Malik, MD, MBA, DFAPA²; and Kimberly Mercille, RN, TMS³

¹ Psychiatry, TMS Institute of America, Center Pointe Hospital, St. Louis, MO

² President / CMO Center Pointe Behavioral Health System. Asst Clinical Professor Dept of Psychiatry St. Louis University, MO

³ Institute of America, St. Louis, MO

ABSTRACT: Objective: The purpose of this case report is to provide information regarding the importance and effectiveness of monthly maintenance therapy (if required) after completing full course of 36 TMS (Transcranial magnetic stimulation) sessions. (Most patients do not require the maintenance after full course of treatment.)

This is the first study to evaluate the cause of relapse of depression after TMS treatment can be due to failure to do maintenance therapy, no related studies are found in the literature.

METHOD: The participant is a 57-year-old female with chronic history of treatment resistant MDD since her teenage years. She has been treated 3 times with full course of TMS treatment in 2 years with excellent results, and she went in remission from depression after every treatment. However, due to lack of her attendance for maintenance therapy, despite suggestions by the psychiatrist, her depression relapsed each time within 2–3 months. She was unable to follow-up with maintenance therapy due to her financial situation and lack of coverage of maintenance therapy cost through insurance.

RESULT: Patient was monitored from initiation of therapy each day until end with clinical rating scale PHQ9 & GAD7 for depression & anxiety (in all 3 therapies in 2 years). Marked improvement was observed in her symptoms as shown with range during 3 therapies in the chart below. During each therapy, her remission started anytime from 10th–14th treatment and after

completion of treatment, she was in remission, fully functional & back to normal life.

Clinical rating	Baseline score in 3 therapies (Before TMS treatment)	Outcome score in 3 therapies (End of 36 TMS Treatments)
PHQ-9	Range: 18-26	Range: 5-9
GAD-7	Range: 14-21	Range: 6-7

CONCLUSION: Regardless of the limitations of the study (such as case study on one patient), our findings highly suggest that lack of maintenance therapy when needed after completing TMS treatment with full remission may be a cause of relapse of depression in MDD patients. Following through with proper maintenance therapy will prevent relapse of MDD and may have lead to more successful outcomes in subsequent patients. Randomized clinical trial is warranted on large patient population for further evaluation.

REFERENCE:

<https://doi.org/10.1016/j.brs.2018.05.013>

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Misdiagnosis as a Cause of Treatment Failure in Repetitive Transcranial Magnetic Stimulation Therapy (rTMS) for MDD

Sitwat Malik, MD¹; Azfar Malik, MD, MBA, DFAPA²; and Kimberly Mercille, RN, TMS³

¹ Psychiatry, TMS Institute of America, Center Pointe Hospital, St. Louis, MO

² President / CMO Center Pointe Behavioral Health System. Asst Clinical Professor Dept of Psychiatry St. Louis University, MO

³ TMS Institute of America, St. Louis, MO

BACKGROUND AND OBJECTIVE: Research suggests that repetitive Transcranial Magnetic Stimulation (rTMS) is effective, safe, and proven treatment option for patients with treatment resistant major depressive disorder (MDD). Success rate is high, around 65–70% nationwide. Around 30% patients are still not responding to the treatment. Objective of this study is to evaluate the cause of treatment failure or non-responsiveness of TMS treatment despite high efficacy of the therapy. This is the first study to evaluate the cause of treatment failure of TMS therapy.

METHOD: Retrospective, 16 months, post-TMS treatment, Clinical rating scales PHQ-9 and GAD-7.

68 patients who got treatment over 16 months were included in the study, inclusion criteria for this study

includes patients with primary diagnosis of MDD, have previously received at least 20 TMS treatments and must be evaluated with at least two clinical rating scales that were entered each day during treatment.

RESULT:

Number of treated patients:	68
Patients responded to treatment:	50 (73.5%)
Patients not responded:	18 (26.4%)
Mean # of treatments received:	37
Mean Baseline PHQ-9 Score:	19
Mean Outcome PHQ-9 Score:	7

To evaluate the cause of treatment failure in 18 non-responsive patients, patient charts were reviewed in detail. Patients were interviewed near the end of treatment, during follow-ups, and over the phone. It was established that they were either misdiagnosed, have symptoms of other psychiatric disorders such as bipolar depression, have dual diagnoses (e.g. MDD with anxiety, OCD, PTSD) or unclear diagnoses and in need of further psychiatric evaluations. The variety of these diagnostic scenarios mentioned are not typically treated with TMS therapy or treated differently with TMS as compared to MDD, hence the explanation of therapy failure.

CONCLUSION: Number one cause of TMS treatment failure is misdiagnosis due to various reasons. That includes failure to be accurately diagnosed by a primary psychiatrist, as those patients did not have primary psychiatrist and were referred by primary care physicians and were getting treated for MDD without a proper psychiatric evaluation and diagnosis. However, due to the limitations of the study due to small sample size, we propose that further investigations are needed to be replicated in larger patient population.

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Bioequivalence of a Manipulation-Resistant Immediate-Release Amphetamine Sulfate Formulation Compared with Reference Standard

Steve Caras, PhD¹; and Terrilyn Sharpe²

¹ Vice President Clinical Development, Arbor Pharmaceuticals, LLC, Atlanta, GA, USA

² Director of Clinical Development, Arbor Pharmaceuticals, LLC, Atlanta, GA, USA

ABSTRACT: Study Objectives: We compared the bioavailability of racemic amphetamine (d-amphetamine and l-amphetamine) from a manipulation-resistant immediate-release (IR) amphetamine sulfate capsule

(AR19) versus amphetamine sulfate IR tablets (reference).

METHOD: In this open-label, randomized, two-period, two-treatment, two-sequence, crossover study, 36 healthy volunteers aged 18–45 received a single dose (20-mg capsule) of AR19 in one period and a single dose (2 x 10-mg tablets) of reference in another period, after a 10-hour overnight fast. Each drug administration was separated by a washout period of at least 6 days. Bioequivalence for d- and l-amphetamine was assessed using time to peak concentration (T_{max}), peak concentration in plasma (C_{max}), and area under the plasma concentration–time curve from time-zero to the time of the last quantifiable concentration (AUC_{last}) and extrapolated to infinity (AUC_{inf}).

RESULTS: All 36 volunteers completed both treatment sequences. Mean (standard deviation; SD) T_{max} for d- and l-amphetamine was similar for AR19 (2.84 [1.05]; 3.05 [1.22], respectively) and reference (2.52 [0.75]; 2.75 [1.00], respectively). The geometric least-squares mean ratios and 90% confidence intervals were within the boundary of 80%–125% for bioequivalence for C_{max} (d-amphetamine, 98.35% [96.12–100.64]; l-amphetamine, 98.82% [96.42–101.28]), AUC_{last} (d-amphetamine, 99.45% [96.92–102.05]; l-amphetamine, 99.29% [96.55–102.10]), and AUC_{inf} (d-amphetamine, 99.50% [96.77–102.30]; l-amphetamine, 99.23% [96.06–102.50]). A total of 13 mild adverse events were reported by 7 volunteers (AEs; AR19, n = 5; reference, n = 8). No serious AEs were reported.

CONCLUSION: AR19 was well tolerated and was bioequivalent to reference when administered as a 20-mg dose in healthy volunteers.

Funding Acknowledgements: This study was funded by Arbor Pharmaceuticals, LLC.

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Ice Melts Phantogeusia: Cold Inhibition of Gustatory Hallucinations

Suhanna Mutti¹; and Alan R. Hirsch, MD²

¹ Medical Student, Aureus University School of Medicine, Oranjestad, Aruba

² Medical Director, Smell and Taste Treatment and Research Foundation, Chicago, IL

ABSTRACT: Introduction: Relief of phantogeusia through ice cube stimulation has not heretofore been noted.

METHODS: This 70-year-old left handed (familial) female noted the onset, three and a half years ago, of reduced taste