aripiprazole lauroxil contains particles that are loosely associated to facilitate resuspension. Because loosely associated suspensions are shear-thinning, meaning the viscosity of the formulation decreases with higher injection force, the injection must be given rapidly. Vigorous shaking and rapid injection are key aspects of administration and have been accepted by patients and investigators in clinical trials. In a pivotal phase 3 study of aripiprazole lauroxil, the incidence of ISRs was low (3.9% and 5.8% for aripiprazole lauroxil 441 mg and 882 mg , respectively) and mostly associated with the first injection.

Advances in formulation technology have increased LAI options for patients with schizophrenia. The aripiprazole lauroxil formulation differs from other LAIs in that the particles are loosely associated to support use as a ready-to-use pre-filled syringe. Because the suspension is shear-thinning, aripiprazole lauroxil requires rapid injection, which is not required when using other LAIs. An understanding of the differences in formulation design and how they impact the specific techniques associated with an LAI is essential for successful administration.

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Long-term Valbenazine Treatment in Patients with Schizophrenia/Schizoaffective Disorder or Mood Disorder and Tardive Dyskinesia

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ABSTRACT: Background: Patients treated with antipsychotics, regardless of psychiatric diagnosis, are at risk for developing tardive dyskinesia (TD), a potentially debilitating drug-induced movement disorder. Valbenazine (INGREZZA; VBZ) is a novel vesicular monoamine transporter 2 (VMAT2) inhibitor approved to treat TD in adults. Data from KINECT 4 (NCT02405091) were analyzed to evaluate the long-term effects of VBZ in adults with schizophrenia/schizoaffective disorder (SZD) or mood disorder (MD) and moderate or severe TD.

METHODS: KINECT 4 included open-label treatment (48 weeks) followed by washout (4 weeks). Entry requirements included: moderate or severe TD, qualitatively assessed at screening by a blinded, external reviewer; DSM diagnosis of SZD or MD; psychiatric stability (Brief Psychiatric Rating Scale score <50). Stable concomitant psychiatric medications were allowed. Dosing was initiated at 40 mg, with escalation to 80 mg at Wk4 if participants had a Clinical Global Impression of Change-TD score of ≥3 (minimally improved to very much worse) and tolerated 40 mg. A reduction to 40 mg was allowed if 80 mg was not tolerated (80/40 mg); participants unable to tolerate 40 mg were discontinued. Safety was the primary focus, but the Abnormal Involuntary Movement Scale (AIMS) total score (sum of items 1–7) was used to evaluate changes in TD. Mean changes from baseline (BL) in AIMS total score (rated by on-site investigators) were analyzed descriptively. Safety assessments included treatment-emergent adverse events (TEAEs) and psychiatric scales (Positive and Negative Syndrome Scale [PANSS], Calgary Depression Scale for Schizophrenia [CDSS], Montgomery-Åsberg Depression Rating Scale [MADRS], Young Mania Rating Scale [YMRS], and Columbia-Suicide Severity Rating Scale [C SSRS]).

RESULTS: Of 163 participants in the analyses, 103 completed the study. Adverse events (n = 26) was the most common reason for discontinuation. Analyses included 119 participants with SZD (40 mg = 37; 80 mg = 76; 80/40 mg = 6) and 44 with MD (40 mg = 8; 80 mg = 31; 80/40 mg = 5). At Wk48, mean improvements from BL in AIMS total score were: SZD (40 mg, –10.1; 80 mg,–10.7); MD (40 mg, 10.2; 80 mg: –11.6). AIMS total scores at Wk52 (end of washout) indicated a return toward BL levels. Compared to SZD, the MD subgroup had a higher incidence of any TEAE (84% vs 61% [all doses]) but fewer TEAEs leading to discontinuation (7% vs 18%). Urinary tract infection was the most common TEAE in the MD subgroup (18%); somnolence and headache were most common in the SZD subgroup (7% each). Psychiatric status remained stable from BL to Wk48: SZD (PANSS positive, –0.7, PANSS negative, –0.6; CDSS, –0.7); MD (MADRS, –0.3; YMRS, –0.3). Most participants (95%) had no change in C-SSRS score during the study.

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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.

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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

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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 from10th-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.

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

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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