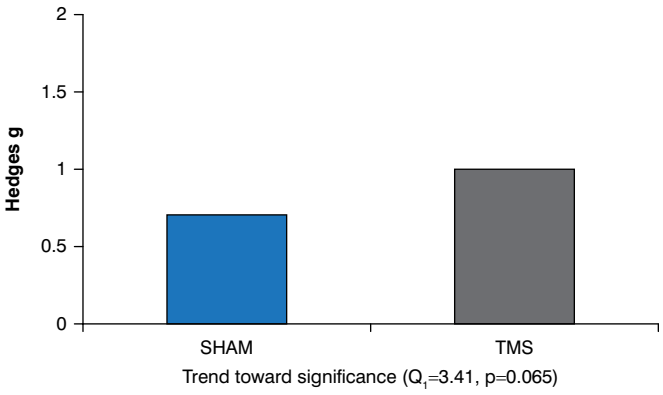
Figure 1. Posttreatment Between-Group Effect



TMS=transcranial magnetic stimulation.
Reproduced with permission from GJ Diefenbach, PhD.

The results of this meta-analysis indicate that TMS is superior to sham for treating anxiety symptoms in patients with depression, and Dr. Diefenbach concluded that it is important to consider expanding TMS treatment to anxiety disorders. She also indicated that it is important for investigators in future studies to include anxiety assessments in their TMS research, to evaluate changes in individual symptoms, response rates, and anxious depression status.

Electroconvulsive Therapy Improves Major Depression More Than Drugs Alone

Written by Nicola Parry

Lucas Primo de Carvalho Alves, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil, presented a poster with results of a study demonstrating that electroconvulsive therapy (ECT) improves the symptoms of major depression more than pharmacological therapy alone [APA 2014 (poster NR5-06)].

The primary indication for use of ECT is in patients with depressive disorders who relapse despite the use of prescription medications. Although meta-analytical studies have demonstrated the efficacy of ECT in treatment of depressive disorders, it is challenging to successfully translate study results into clinical practice, particularly in patients with medical and psychiatric comorbid disease.

With this in mind, Alves and colleagues designed a study to evaluate the outcomes of ECT in severely depressed individuals admitted to a psychiatric inpatient facility.

To be included in the study, patients were required to be older than 18 years with a diagnosis of depression according to Mini International Neuropsychiatry Interview criteria. In total, 147 patients were enrolled and divided into 2 groups: ECT-treated (n=43; mean Hamilton Rating Scale for Depression [HAM-D] score, 25.05) and non-ECT-treated (n=104; mean HAM-D score, 21.61).

Primary outcomes were improvement in depression based on the HAM-D score; response (HAM-D improvement ≥50%); remission (HAM-D score ≤7); and duration of hospitalization.

Based on mean HAM-D score from admission, symptoms of depression were significantly improved in the ECT-treated group (p=0.004; mean HAM-D score at discharge, 7.7) compared with the non-ECT-treated group (mean HAM-D score at discharge, 7.5).

The mean duration of hospitalization was significantly higher for patients in the ECT-treated group (p<0.001; 35.48 days), compared with those in the non-ECT-treated group (24.57 days).

Although patients in the ECT-treated group had significantly higher depression scores at the time of admission to the study than those who did not receive ECT, at the time for discharge, patients in both groups had similar scores. Alves stated that this increased response rate highlights the efficacy and effectiveness of ECT in severely depressed patients.

He concluded that the longer hospitalizations in ECT-treated patients emphasizes the need for advance knowledge of clinical predictors of the response to ECT, to reduce the time between admission and the first session for patients who will benefit from ECT.

First-Line Antidepressants Produce Similar Responses in Major Depressive Disorder

Written by Nicola Parry

Radu V. Saveanu, MD, Leonard M. Miller School of Medicine, University of Miami, Miami, Florida, USA, presented results from the first half of the randomized controlled International Study to Predict Optimized Treatment in Depression [iSPOT-D; NCT00693849]. The study demonstrated that, for patients with major depressive disorder (MDD), escitalopram, sertraline, and venlafaxine extended release (XR) produced similar treatment response rates, with mild and similar side effects.

Although antidepressant medications (ADMs) are effective, their benefit could be enhanced by identifying pretreatment clinical or neurobiological features that predict response versus nonresponse to treatment, as well as features or moderators that help identify which specific treatment is the best match for a particular patient.

With this in mind, Dr. Saveanu and colleagues conducted the multiphase, multisite, randomized controlled iSPOT-D trial. This ongoing real-world effectiveness trial, with no placebo arm, was designed to identify genetic, physical, and psychological markers that predict specific response to a range of ADMs in a large group of outpatients diagnosed with MDD. Focusing on outcomes that may affect how personalized medicine is implemented in depression, the study was designed to identify predictors and moderators of outcomes in order to change how ADMs are selected.

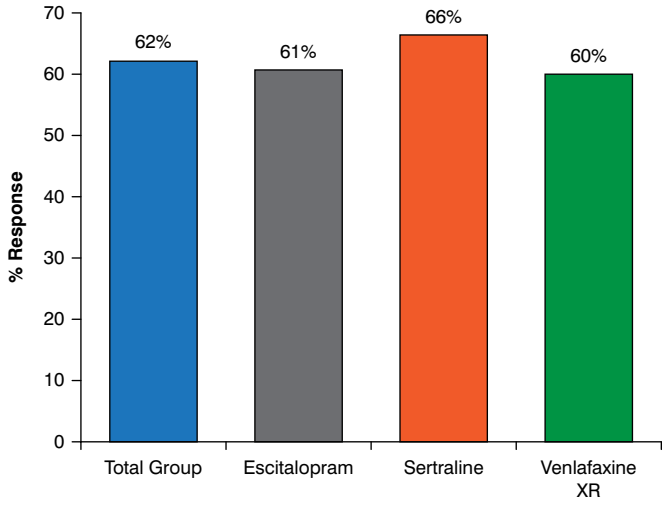
To be included in the study, participants were required to be 18 to 65 years old, meet the DSM criteria for MDD, and score ≥16 on the Hamilton Rating Scale for Depression, 17-Item (HAM-D-17).

Exclusion criteria included suicidal ideation or planning, contraindication to study ADMs, recurrent or current substance dependence, and other mental disorders.

Outcome measures were obtained 8 weeks after ADM treatment. The study's primary outcome was rate of treatment response (defined by ≥50% improvement) and remission (defined by score ≤7) using the clinician-rated HAM-D-17 score. Secondary outcomes included rate of treatment response (defined by ≥50% improvement) and remission (defined by score ≤5) using the self-reported Quick Inventory of Depressive Symptomatology, 16-Item (QIDS-SR16) score; functional capacity; and side effect burden to the three ADMs.

In Phase 1 of the trial, participants (n=1008; mean age 37.8 years; 57% female) were randomly assigned to receive escitalopram (10 mg/day; maximum 20 mg/day), sertraline (50 mg/day; maximum 200 mg/day), or venlafaxine XR (75 mg/day; maximum 225 mg/day), the three first-line ADMs prescribed worldwide.

Figure 1. HAM-D-17 Response Rates Across the Three ADM Arms (defined by ≥ 50% improvement)



HAM-D-17=Hamilton Rating Scale for Depression, 17-Item; XR=extended release.

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HAM-D-17 response rates were similar and consistent across the escitalopram, sertraline, and venlafaxine arms (61% vs 66% vs 60%, respectively; Figure 1), as were HAM-D-17 remission rates (48% vs 46% vs 42%, respectively). QIDS-SR16 response rates (55.7% vs 55.6% vs 48.4%) and remission rates (41.0% vs 38% vs 33.8%, respectively) were also similar across the three arms. Side effects were also mostly mild, and they occurred in a similar number of participants among the three groups (85% vs 80% vs 79%, respectively).

The results of the first half of this study indicate that escitalopram, venlafaxine, and sertraline produce similar and consistent response rates in patients with MDD, with similar and mild side effects. These findings even the clinical research playing field for identifying predictors and moderators of response that can be translated into patient care, Dr. Saveanu concluded.

Single-Dose Ketamine Associated With Rapid Improvement of Depressive Symptoms

Written by Mary Beth Nierengarten

Data from a randomized clinical trial show that patients with moderate to severe depressive symptoms treated with a single dose of ketamine show rapid improvement of depressive symptoms compared to patients treated with a psychoactive placebo control.

Sanjay J. Mathew, MD, Baylor College of Medicine, Houston, Texas, USA, and Michael E. Debakey, VA Medical Center, Houston, Texas, USA, reported on outcomes of the Antidepressant Efficacy of Ketamine in Treatment-Resistant Major Depression: A Two-Site Randomized Controlled Trial [Murrough JA et al. *Am J Psychiatry* 2013], a two-site, parallel-arm, double-blind, randomized controlled trial that evaluated the rapid antidepressant efficacy of ketamine compared with an active placebo control (ie, midazolam) in patients with treatment-resistant major depression.

The study included patients with a primary diagnosis of major depressive disorder randomized in a 2:1 ratio to a single intravenous infusion of ketamine (0.5 mg/kg; n=47) or midazolam (0.045 mg/kg; n=25) between November 2010 and August 2012. Patient characteristics and demographics were similar between the two groups, with all patients showing chronic, treatment-resistant depression with moderate to severe symptom severity.

An anesthesiologist administered the 40-minute infusion and monitored continuous vital signs throughout the infusion. After 24 hours, all patients were discharged and sent home. They then were followed at 2, 3, and