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## **The 26th International Society of ECT & Neurostimulation (ISEN) Annual Meeting Atlanta, Georgia**

**May 13, 2016**

ISEN continues to grow and had the largest turn out ever this year. The morning was spent with presentations on the topic of preventing relapse after an initial series of ECT or TMS. The afternoon was spent in breakout Workshops and Abstract Presentations.

### **Morning Symposium—Preventing Relapse**

- Maintaining Remission Following ECT for Depression: Psychopharmacological Approaches. The old data using a TCA plus Lithium were revisited along with the paucity of effects. Two new large studies involving alternate psychotropic classes are underway.
- Ultrabrief Pulse Right Unilateral ECT: Results from the PRIDE Study (soon to be published in AJP). Phase I involved patients that were > 60 years old, and was the initial Index Series over the first month. Interesting notes

include; A) psychotic features showed a higher rate of remission (70% vs 60%), B) the greater the age, the greater the chance of remission; “older is better”, and, C) 84% were no longer suicidal by the end of the Initial ECT Series. Phase II compared Maintenance Medication only (Lithium + Venlafaxine) vs. Maintenance Medication with Continuation ECT (4 weekly ECT’s after the series) with “Rescue ECT” (2 ECTs given when depressive symptoms began to recur. The Rescue ECT arm cut the relapse rate in half compared to Maintenance Medication only. Take Home Message (THM): “The ECT clinician should be liberal in prescribing ECT post-Index Course”. That is, gradually taper an ECT Course, and think more about Continuation and Maintenance ECT.

- Maintenance ECT for Patients with Clozaril-Resistant Schizophrenia. This was a small (14 patients), but thought provoking study on the use of ECT in Institutionalized patients that did not respond to adequate blood levels of Clozapine. The study design was 12 Bilateral Index ECT’s (60% of patients responded), then weekly ECT X 4, followed by 4 biweekly treatments, with 2 final ECT treatments a month apart. There were 7 dropouts in the study; the reason for dropout was that they improved to the point of meeting criteria for discharge, and so were, but, were in the hospital for so long that they had lost all of their social supports for a variety of reasons, and, were unable to return for Outpatient ECT, and lost to follow-up.
- Long-term Outcomes with TMS Therapy: A Review of Continuation & Maintenance Data. This was a 12 month durability study comparing monthly Maintenance TMS w/o Medications, to no meds/no TMS. Relapse rates were high and equivalent, and there was no prolonging of wellness in either arm. 1 arm included the option of “rescue TMS” (15 TMS’s, 5/week X 3 weeks) which was effective, however 2/3rds of patients required rescue. THM: Once monthly Maintenance ECT is not effective, and other schedule paradigms need to be explored.

#### **Afternoon Concurrent Workshops** (reporting from the 2 attended)

##### Novel Brain Stimulation—Update on Neuromodulation Treatments

Update on t-DCS (transcranial Direct Current Stimulation)—Australia is the leader in this field. This is a very low level of electrical stimulation given over 30 minutes, 5 days/week X 4 weeks. The current hypothesis is that t-DCS changes the resting potential of neuronal membranes. Last year, in this column, it was reported that an International Multi-Center Trial was underway to explore efficacy of this new modality. Now, soon to be published results show that Sham t-DCS had higher response rates than active t-DCS. Interestingly, it was the Bipolar Depressed patients that showed the greatest improvement in Sham vs. Active Treatment. The Researcher suggested several hypotheses on this discrepancy, with the highest speculated, that in Sham t-DCS, an extremely small current is still delivered between the electrodes, and, that this may be a new area of exploration.

A real positive of t-DCS is that there appears to be cognitive enhancement, noted in current studies. A preliminary study suggests that in Psychiatric Disorders with cognitive impairment, that Cognitive Training + t-DCS, shows notable improvement over Cognitive Training + Sham t-DCS. t-DCS appears to reduce Auditory Hallucinations and may have a lasting effect. The Australians are exploring a t-DCS device which can be used at home under Clinical Supervision.

##### Update on DBS (Deep Brain Stimulation)

There is not much to report in this area...under traditional DBS...Standard DBS remains effective for OCD, but as reported last year is not making inroads for Depression. The small open-label studies are positive, but the large multi-center trials remain negative. The Germans are now studying the Median Forebrain Bundle as a new target. What is new and exciting is DBS based on a Closed Loop System. An umbrella of miniature EEG electrodes is implanted with a miniature receive and send device implanted at the Occiput. Recordings will map out behaviors based on Brain Circuitry resulting in Psychiatric Symptoms, not DSM diagnoses (e.g. approach-avoidance,

anhedonia). Once enough data is collected, stimulus targets will be created based on these electrical signatures. This is along the new paradigm of the NIMH, funding studies based on biologic markers, not DSM diagnoses.

Update on MST (Magnetic Seizure Therapy)—the Canadians continue to lead this field; this remains basically ECT with magnetic, instead of electrical fields, which can be more targeted resulting in less side effects compared to ECT. Like ECT, it appears to have anti-suicidal properties. However, the course of treatments to remission is longer than ECT (13-14 treatments), and, what studies exist, involve “cherry picked” patients, as opposed to current ECT studies. The bottom line is that MST appears to fit somewhere between TMS and ECT in effectiveness and side effect burden. Whether it gains traction in the U.S. remains to be seen.

Family-Centered Care in ECT—this was a leading topic of the Conference, introduced at the more formal Morning Session. This involves having a Family or Support Member present during the entire ECT treatment. The Workshop was presented by M. Justin Coffey, MD, son of Ed Coffey, PhD, whom has been a spearhead in collecting and presenting data on the effectiveness of ECT for the past several decades. The workshop involved not only a presentation by Dr. Coffey and how it has transformed ECT at the Menninger Clinic, but also included testimony by his Anesthesiologist, and, the husband of a female ECT patient that underwent ECT. Notations of this workshop include:

- Family members have been offered to be present during Caesarean Birth, CPR, and Pediatric Trauma for years now, and, all studies have been positive from family perspectives.
- Dr. Coffey’s Anesthesiologist testified how his department gave push-back at first, but upon acceptance, is totally in line with this new approach. In fact, the Medical-Surgical side of their Hospital has abandoned “Visiting Hours”, and welcomes a family member to be present 24 hours ATC at a patient’s bedside with overwhelmingly positive family and hospital staff feedback.
- Dr. Coffey and his Anesthesiologist both agreed, that Family-Centered ECT improves the performance of their ECT Treatment Team.

Family-Centered ECT:

- has, or is being currently adopted by leading ECT treatment Centers
- reduces the stigma of ECT: “we have nothing to hide”
- improves the patient and family ECT experience for those patients and families that elect this treatment option

I am currently in the process of bringing Family-Centered ECT to our current service at Aurora Behavioral Health Hospital in Glendale, and, the soon to be opened ECT service at Aurora Tempe. If I can be of any help in ferreting out the above, please contact me at [BrianEspinozaMD@gmail.com](mailto:BrianEspinozaMD@gmail.com)