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Electroconvulsive Therapy
IV Ketamine for Depression
Enhanced Med Management
Pharmacogenomic Testing
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The 28th International Society of ECT & Neurostimulation (ISEN) Annual Meeting NYU Kimmel Center, NYC May 6, 2018

This year we had members from 21 different countries in the audience. This was my tenth year in attendance, and the morning was spent with presentations on indications for ECT other than depression, and review of a study on ECT related mortality. The afternoon was spent in Breakout Sessions and Abstract Presentations.

Morning Symposium—Beyond Depression: Other Indications for ECT and Other Neurostimulation Treatments

- ECT and Neurostimulation Treatments for Schizophrenia and Mania—
  In looking at the global utilization of ECT, more patients receive ECT for Schizophrenia, than

for Depression. This occurs when looking at utilization in Eastern Europe, Asia, and Africa. The Royal College of Psychiatrists include Catatonic Stupor, Clozapine-refractory disease, and Neuroleptic Malignant Syndromes as indicators for considering ECT.

TMS—a 2018 met-analysis showed some help with psychosis and negative symptoms; a Randomized Controlled Trial (RCT) showed no benefit in cognition.

t-DCS—a 2018 met-analysis showed some improvement in negative symptoms; a recent RCT showed an effect on Auditory Hallucinations.

TMS and t-DCS bottom line—too little data to make any conclusions on utility in Schizophrenia.

Mania—the concurrent usage of Lithium and ECT, without the need for holding Lithium doses, is fine in younger healthy subjects.

- ECT for Neurocognitive Disorders

  ECT has been used for patients with Dementia with Aggression. A McClean Hospital Case Series showed significant benefit. In a series of 10 patients, mMSE scores improved modestly. A Randomized Double Blind Prospective Study is currently underway.

- ECT and TMS for PTSD

  ECT for PTSD—an open trial showed reduction in CAPS (Clinician Administered PTSD Scale) scores. The consensus is that using ECT in Major Depressive Disorder with PTSD is "very reasonable.

  TMS for PTSD—an open trial at UTSW Medical Center at Dallas showed significant improvement when used as an augmenting agent to Cognitive Processing Therapy.

  Currently there is "preliminary support" for the usage of TMS in PTSD.

- ECT for OCD: Still Obsolete?

  This was presented by a European researcher whom felt that ECT was effective for OCD in the absence of comorbid Mood Disorders, and reported significant results using Bifrontal ECT. In conversing with U.S. colleagues we were wondering where we could find this patient type.

Journal of ECT Best Paper Award and Presentation—-Electroconvulsive Therapy and All-Cause Mortality in Texas, 1998-2013

Two 2017 reviews of available literature indicated the following;

2-4 deaths per 100,000 ECT Treatments

3-4 deaths per 100,000 procedures under General Anesthesia (all procedures)

Texas has established an ECT Registry with mandatory reporting on those patients receiving ECT.

This study looked at all patient deaths that occurred within 14 days of receiving ECT;

27% of the patients were in Maintenance ECT, and made up 49% of overall deaths, the leading cause being suicide (the risk of suicide appears to be greater in Maintenance versus the Index Series of ECT).

When controlling for Medical Comorbidity, there was no direct causal linkage of ECT and death.

Seven states now have some type of Mandatory Reporting system in place.

Concurrent Afternoon Breakout Sessions—Research Symposiums

- **Is ECT dangerous? A Systematic Review and Pooled Analysis of ECT Related Mortality Rates**

  Danish data—the upside of Socialized Medicine is large data bases; looking at 716,000 ECT treatments performed; no causal relationship established of ECT inducing death

- **Abstract Oral Presentation: ECT Induces Volume Increase in the Human Dentate Gyrus**
  A 9 study metanalysis indicated that Bilateral ECT increased Dentate Volume, i.e. no "Brain Damage" from ECT, yes on Neurogenesis after the Neurodegeneration inherent in Mood Disorders
- **Ketamine, ECT and Depression**
  A pilot trial utilizing IV Ketamine as a form of Maintenance after a successful series of ECT logistically failed (this is consistent with my experience; ECT and IV Ketamine are not interchangeable or synergistic).
- **Abstract Oral Presentation: Long-term Neurocognitive Functioning after Electroconvulsive Therapy in Patients with Late Life Depression;**
  The Dutch/Flemish ResPECT consortium (RESearch in Psychiatry and ECT)
  Longitudinal Cognitive Testing shows no decrease in cognition in late life due to ECT. 10-15% of patients show improvement in Cognitive testing.
- **Iterative Strategies to Refine and Optimize DBS (Deep Brain Stimulation) for Depression**
  As reported last year, the U.S. device manufacturers have given up on this endeavor. The Europeans are still investigating. A small study showed 8 of 11 patients showed improvement in novel brain bundle regions. Techniques utilized include Tractography via 3D MRI images, and Event Related Potentials invoked by Facial Expressions.

International data and consensus remains consistent; the more focal and less acute cognitive impairing the modality, a drop in effectiveness rate ensues (ECT versus TMS, MST, d-TCS, etc). So, it remains imperative upon physicians to take this into consideration in procedural approaches, and risk benefit analysis (short term memory loss is better than long term life loss and/or suicide).

Please contact me with me any questions,

Thank you,

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