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Self-evaluation of the cognitive effects of ECT

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Objectives: Numerous studies have found that subjective memory improves shortly following ECT using standard self-evaluation questionnaires. These changes covary strongly with mood state while being not associated with objective memory tests or treatment parameters. This study compared patients' evaluations of the cognitive effects of ECT using a novel direct interview about subjective global impact and standard methods.

Methods: We conducted a prospective, randomized, double-masked trial of the effects of pulse width (0.3 vs. 1.5 ms) and electrode placement (right unilateral vs. bilateral) on patients' evaluations of cognitive outcomes. Subjective evaluations were obtained prior to starting and during the week following the randomized ECT course, using the Cognitive Failures Questionnaire (CFQ), Squire Memory Complaint Questionnaire (SMCQ), and the novel Global Self-Evaluation of Memory (GSE-My). An extensive neuropsychological battery was administered at the same time points.

Results: CFQ and SMCQ scores improved at postECT relative to preECT. At both time points, these scores were strongly associated with HRSD scores and not with objective deficits or treatment parameters. In contrast, on the GSE-My patients reported a deleterious memory effect after ECT. GSE-My scores were also associated with objective memory loss and treatment technique.

Conclusions: Characterization of patients' experience of cognitive side effects following ECT differs markedly depending on the assessment method. Direct questioning about global impact revealed more negative views about ECT's impact. These results support the findings of a prospective, naturalistic, observational community study representing together the first reports of concordance between subjective and objective measures of ECT's effects on memory.

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Deep brain stimulation in treatment-refractory major depressive disorder: Preliminary results in three patients

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Background and aims: Deep Brain Stimulation (DBS) is a neuromodulation technique that involves the implantation of electrodes into specific parts of the brain. DBS is reversible, nondestructive, and can be modified by adjustment of the stimulator settings after implantation. Since 1998 we investigate DBS as a therapeutic option for severe, treatment-refractory obsessive-compulsive disorder (OCD). DBS in the anterior limbs of the internal capsules induced clinically significant therapeutic benefit in this patient group, not only in severity of OCD symptoms, but also on the patient's mood scores.

Despite advances in biological treatment and psychotherapy for major depression (MD), a substantial number of patients fail to improve.

Based on the results of DBS in OCD, this study investigates the effectiveness, safety, and tolerability of DBS in the same target for treatment-refractory MD.

Methods: Three patients with a longstanding history of MD, who failed to improve even after years of pharmacotherapy, psychotherapy, electroconvulsive therapy and even experimental interventions were selected. Bilateral DBS leads were implanted in the ventral part of anterior limb of the internal capsule. Participants underwent standardized and detailed psychiatric assessments on a regularly scheduled basis, both pre- and postsurgically.

Results: After six months of chronic DBS, all three patients showed a clinically significant reduction in depression severity of 50 percent or greater on the Montgomery-Asberg Depression Rating Scale. Two of the three patients were in remission. Quality-of-life measures improved as well.

Conclusions: Further research is warranted, but patients with severe, longstanding, treatment-refractory MD may benefit from DBS.

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New electromagnetic (quantum) therapeutic tools (specially) in depression, schizophrenia, parkinson's disease and dementia

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Electronic brain implants and electromagnetic pulses work better for some people who suffer from psychiatric disorders than Electroconvulsive therapy, psychopharmacotherapy or psychotherapy. These biomedical therapeutic tools include: Artificial Hippocampus; Deep Brain Stimulation (DBS); Vagus Nerve Stimulation (VNS); Magnetic Seizures Therapy; repetitive Transcranial Magnetic Stimulation (rTMS); and, transcranial Direct Current Stimulation (tDCS). In this communication, it is focused the use of rTMS, in the treatment of Depression, Parkinson's Disease/Negative Syndrome of Schizophrenia and Auditory Hallucinations within Positive Syndrome of Schizophrenia (PSS), and of tDCS, in the treatment of Depression and Dementia, and highlighted some neural networks implicated in these syndromes, which dysfunction is reverted through the use of those technological therapeutic tools. Also, it is presented mathematical models of: the (oscillatory) glutamatergic NMDA mediated neurotransmission system; and the Auditory Hallucinatory activity (within PSS). A nanodevice's project (sponsored by US Foresight Institute for Nanotechnology), for monitoring brain activity, at a subatomic level, during administration of rTMS and tDCS is also presented. NASA had elected DBS, VNS and rTMS, to be used in selected populations, due to their neuromodulator, neuroplastic and neuroprotective effects.

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A rare case of dissociative fugue with unusually prolonged amnesia successfully resolved by ECT

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Case history: Young adult woman was admitted to our department with symptoms of depression. The patient had a history of sexual abuse in her childhood. After her admission she received antidepressive treatment with a selective serotonin reuptake inhibitor (sertraline) as well as supportive therapy.

Course of the disease: After a four months treatment the patient suddenly disappeared from her hometown. Some days later she was