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e-Poster Viewing: Psychosurgery and stimulation methods (ECT, TMS, VNS, DBS)

EV1114

The legacy of Walter Jackson Freeman II (1896–1972): The lobotomist

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Introduction Walter Jackson Freeman II was born the grandchild of Williams Keen, one of world's most renowned surgeons from Philadelphia and the son of an otorhinolaryngist, which may have been contributed to his interest in medicine. Freeman started his medical career in a psychiatric hospital and over the years, he operated thousands of patients. He was a protagonist in American psychosurgery and therefore, he often has been referred as the "lobotomist".

Objectives To present the scientific papers of Walter Jackson Freeman on psychosurgery.

Aims To review available literature and to show evidence that Freeman made a significant though controversial contribution to the development of psychosurgery.

Methods A biography is presented and discussed followed by a literature review.

Results In this whole career, "the lobotomist" operated more than 3500 patients and performed mainly operations on the frontal areas. However, he operated human brains without due regard for his patient's mental abilities and emotional well-being after their lobotomy. Despite his work was praised, there was also a lot of criticism on his methods.

Conclusion Despite the dubious reputation, Freeman can be remembered as an ambitious doctor who made a significant contribution to the development of psychosurgery. However, unfortunately he crossed medical and legal boundaries.

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EV1115

A systematic review of transcranial magnetic stimulation use for treating autistic spectrum disorders: Preliminary results

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Autistic spectrum disorders (ASD) are a group of neurodevelopmental disorders that manifest as deficits in social communication and interaction, and restricted, repetitive behaviors and interests. ASD affect at least 1% of the population and are associated with lifelong disability and early death. There are no effective biological treatments for ASD, although non-invasive neuromodulation has sparked great interest as a possibly useful therapeutic approach. Here, we present preliminary results of a systematic review on the effectiveness of transcranial magnetic stimulation (TMS) in ASD treatment. Using appropriate syntax we searched Pubmed. Web of Science, Science Direct, and Educational Resources Information Clearinghouse. Following standard PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta-analyses) procedures, we selected 12 eligible studies, comprising four controlled and four uncontrolled trials on the effects of TMS on ASD core symptoms, and 9 controlled and three uncontrolled trials on TMS effects on cognitive performance in ASD. The 12 studies totaled 233 subjects. Although combined effect sizes favor TMS in all fours groups of studies, conclusions are limited by the high study heterogeneity. Furthermore, only three of the controlled studies used sham TMS as the control intervention, and only two studies followed up the therapeutic effects after the last TMS session. Side effects, none of them serious, occurred in 6.4% of treated subjects. Our main conclusion is that there is currently little evidence that sustains the commercial offer of TMS for treating ASD. Better-designed studies are badly needed to fully elucidate the role of TMS in the treatment of ASD.

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EV1116

Place of electroconvulsive therapy in the treatment of depression in France: A comparative study between clinical practice and international recommendations

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Objectives To study the place of electroconvulsive therapy (ECT) in the treatment of major depressive disorder in France and compare it with international recommendations and algorithms.

Method Multicenter, retrospective study in 12 French university hospitals. Diagnosis, delay between the onset of the episode and the first day of ECT, previous treatments have been identified. Only patients treated for major depressive disorder between 1 January 2009 and 1 January 2014 were included.

Results A total of 754 patients were included (middle age 61.07 years, sex ratio 0.53). The diagnoses listed were: first major depressive episode (14.95%), bipolar depression (38.85%) and unipolar recurrent depression (46.19%). The delay before ECT, was 11.01 months (13,98), and was significantly longer for first episodes (16.45 months, P < 0.001) and shorter in case of psychotic symptoms (8.76 months, P < 0.03) and catatonic symptoms (6.70, P < 0.01).

Conclusions The delay before ECT appears on average, four times longer than recommended by treatment algorithms for the management of major depressive disorder. This long delay could be explained by a very heterogeneous access to this treatment in French territory.

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EV1117

A tribute to Jose M.R. Delgado (1915–2011): The pioneer of electric brain-stimulation

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Introduction José Manuel Rodriguez Delgado (1915–2011), a Spanish physiologist, was among the first scientist to perform electric brain stimulation in both animals and humans. His work on brain-stimulation research during the 1960s and 1970s was innovative but also controversial.

Objectives To present the scientific papers of Jose Delgado on psychosurgery.

Aims To review available literature and to show evidence that Jose Delgado made a significant contribution to the development of psychosurgery.

Methods A biography and private papers are presented and discussed followed by a literature review.

Results Delgado showed that with electrical brain stimulation one could evoke well-organized complex behavior in primates. A rhesus monkey was stimulated with an electrode implanted inside the red nucleus, followed by a complex sequence of events. After stimulation of an area three millimeters from the red nucleus, the rhesus monkey just yawned. Delgado also investigated the mechanisms of aggressive behavior in other animals. Stimulation of the caudate nucleus by remote control in a fighting bully resulted in sudden paralysis. In some human patients suffering from depression, euphoria was induced after stimulation of the septum.

Conclusion Delgado pioneered the brain electrode implantation in order to electrically stimulate specific brain areas for treatment epilepsy and of different types of mental illness. He was severely criticized. His studies, however, paved the way for new modulation techniques such as the development of deep brain stimulation.

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EV1118

Manic switch in bipolar patients treated with electroconvulsive therapy for treatment-resistant depression: The experience at the mood disorder unit of Milan (Italy)

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Introduction Despite appropriate treatment, 30–40% of depressed patients, both unipolar and bipolar, do not achieve improvement, with high morbidity and mortality. For bipolar patients another risk is the switch into mania due to antidepressant treatment. The concern about the switch, suggests to administer antidepressants at lower doses, in combination with mood stabilizers and second generation anti-psychotics.

Objectives We performed an observational study on a sample of 23 bipolar patients treated with ECT for severe TRD in last 3 years, in order to evaluate the risk of switch.

Methods Twenty-three bipolar inpatients, undergoing bitemporal ECT twice/week, with MECTA spectrum device. Main demographic and clinical data collected. Hamilton rating scale for depression (HAM-D). Clinical response defined as 50% reduction of HAM-D score at the endpoint from baseline; remission as HAM-D score at the endpoint < 8. Young Mania rating scale (YMRS) weekly in order to assess switch into mania.

Results Thirteen (56.5%) females, 10 (43.5%) males, mean age 60.1 ± 10.3 years. Mean age at onset 35.5 ± 13.6 years. Mean number of episodes: 7.1 ± 3.6 . Mean duration of current episode: 33.4 ± 24.9 weeks. Mean HAM-D basal score: 30.0 ± 5 . Each patient underwent a cycle of ECT (mean No. 6.7 ± 3.3). Pharmacological treatment was administered upon clinical need. Response rate 87%, remission rate 43.5%. Three out of 23 (13.04%) patients had transient hypomanic switch, spontaneous recovery within 7 days after the last ECT.

Conclusions Our experience confirms that ECT is a powerful antidepressant, especially in patients with severe long-lasting depression, refractory to treatment. ECT is also a safe procedure: no adverse effects were reported. The manic switch rate is comparable with antidepressant drugs.

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EV1119

From hypomania to mania after correcting severe hypoglicemia: A case report to recall insulin shock therapy

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Introduction In the early 20th century, shock therapies developed worldwide as the most effective means to treat severe mental illness. In 1927, Manfred Sakel introduced the newly discovered insulin as a means to treat opioid-addicted patients, by relieving withdrawal symptoms. After noticing that some psychotic patients notably recovered from their psychotic symptoms after accidental insulin comas, he extended this technique to schizophrenic patients, arguing that up to 70% of his patients improved with this therapy. Insulin shock therapy soon spread all-over the world and became one of the most important treatments for severe mental illness. Regardless of the high-rate complications, insulin shock therapy only declined after the introduction of anti-psychotic drugs.

Objective Description of a clinical case.

Methods Non-systematic review of literature and case report.

Results A 70-year-old female with type-1 bipolar disorder and

type-2 diabetes was referred to a psychiatry emergency department (ED) for 2-week behavioral disorder, featuring restlessness, agitation, insomnia, verbiage and persecutory delusions. In the ED, she presented calm, cooperating, with a subtle humor elation and slight disinhibition. The speech was somewhat confusing, but with