

would be a comprehensive study using DBS in multiple brain regions while incorporating blinded controls. In summary, DBS could be a viable treatment addition for TRD, but more thorough studies are needed to deduce its true efficacy. Future collaborative studies investigating the efficacy of DBS over ECT in TRD may assess further therapeutic potential.

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EPV0864

Philosophical impact of psychosurgery: a narrative of the history of psychosurgery

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Introduction: To fully comprehend and appreciate the impact of psychosurgery on treatment-resistant depression it is pertinent to review its initial development and subsequent history. By reviewing previous studies of psychosurgery, we can build a narrative of what was, what currently is and what might be. Assessing the complex philosophical dilemma of the mind and the impact this has on individuals' concept of psychosurgery has helped to bridge the gap between Neurosurgery and Psychiatry.

Objectives: We aimed to examine this question, starting at the very beginnings of our concept of mind, working through to modern-day thinking, how we approach both neurosurgery and psychiatry and help to bridge the two.

Methods: A narrative review of the current literature concerning neurosurgery for mental disorders and said applications to modern psychiatry was conducted. Emphasis on philosophical thought processing in conjunction with the neurosurgical intervention was noted.

Results: Psychosurgery has its roots in the early philosophy of mind, concerned with distinguishing whether the mind is a physical entity or immaterial. Psychosurgery is reliant on a physical concept of the mind, or at the very least that the mind supervenes the physical brain. History has shown us examples of this, with the archetype of this being the story of Phineas Gage. Since its onset psychosurgery has moved in and out of vogue. After being met with early scepticism it later went on to be performed thousands of times to help cure schizophrenia. In the 1800s, Gottlieb Burkhardt pioneered initial surgical interventions on the brain with intended psychiatric outcomes, moving on to work from Egas Moniz and the development of leucotomies and famously lobotomies, to modern medical techniques of Deep Brain Stimulation.

Conclusions: Psychosurgery has faced much opposition throughout history due to the uniquely invasive nature of not just affecting us physically but also mentally and the implications that this has for us as humans and our understanding of ourselves. As both medical and cultural views of mental health have changed over time, so has our understanding of psychosurgery and its potential applications. It is possible that early attempts to implement psychosurgery, before the advent of modern medicine, did more harm to

psychosurgery's reputation than good. However, without those early forays, we may never have progressed to the modern techniques we now utilise.

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EPV0865

ELECTROCONVULSIVE THERAPY FOR AGITATION IN LEWY BODIES DEMENTIA

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Introduction: Dementia with Lewy Bodies (DLB) is a primary degenerative dementing syndrome characterized by visual hallucinations, fluctuation in cognition, depressive symptoms and parkinsonism. Literature has shown the utility of electroconvulsive therapy (ECT) in demented patients regarding depressive symptoms and agitation. Nevertheless, the majority of cases described include patients with vascular dementia and Alzheimer's disease. There are no cases informed concerning ECT in DLB patients with agitation and aggressive behaviors.

Objectives: Evaluate the impact of electroconvulsive therapy (ECT) for agitation in a patient with diagnosis of Lewy Bodies Dementia (DLB).

Methods: Case report. 68-year-old male, with no prior neuropsychiatric history, was present for psychiatric evaluation for 5 year history of progressive dementia with fluctuations in cognition, complex visual hallucinations, delusional beliefs, depressive mood, anhedonia, irritability, associated to parkinsonism and increasing autoaggressive behaviors and agitation.

An extensive neurologic workup including neuroimaging, EEG and laboratory studies failed to reveal a specific etiology. Neuropsychological testing reveals frontal, attentional, and visuospatial dysfunction. A presumptive diagnosis of DLB was made.

Medication trials including donepezil, memantine, lamotrigine, sertraline, quetiapine, risperidone and melatonin failed to manage his depressive, psychotic and behavioral disturbances.

Results: Considering past medication failures and prominent behavioral disturbances family consented for an acute course of ECT.

Initial acute phase consisted of 6 sessions of right unilateral, brief pulse width (0.3 ms) ECT tri-weekly utilizing Mecta Spectrum. Anesthesia was induced with propofol, and received succinylcholine for muscle relaxation. Initial charge was 115 mC (6x seizure threshold), then raised to 192 mC. Seizure duration averaged in 22 seconds. No adverse reactions reported.

Clinical outcomes were measured with the CGI-Efficacy Index. Pre-ECT CGI-SI score was 6 (severely ill) and post-ECT CGI-I was 3 (minimally improved).

Conclusions: Mood and behavioral disturbances are a frequent primary motive consultations in DLB patients. The treatment is challenging due to the sensitivity to antidopaminergic medications evidenced in this type of patients. This case suggests that ECT has

an impact in the treatment of agitation and aggression in DLB patients, although further investigation is needed.

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EPV0866

Post-electroconvulsive therapy cognitive alterations

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Introduction: Electroconvulsive therapy (ECT) is a medical treatment most often used for patients with severe major depression or bipolar disorder who have not responded to other treatments, as well as for resistant schizophrenia, and consists of brief electrical stimulation of the brain while the patient is under anesthesia. It is usually administered by a team of trained health care professionals, including a psychiatrist, an anesthesiologist and a nurse or physician assistant.

The mode of action is not well known, but it is assumed that ECT is associated with a significant reduction in brain connections in the dorsolateral prefrontal cortex, which is associated with a significant decrease in depressive symptoms. This would support the hypothesis that hyper-connectivity in this area of the brain is closely linked to depression.

Despite its great effectiveness, this technique remains limited by numerous contraindications and exposes the patient to a multitude of short-, medium- and long-term side effects, notably cognitive disorders.

Objectives: To shed light on the cognitive disorders affecting mnemonic processes, learning and thinking after electroconvulsive therapy.

Methods: We have performed a systematic literature review using the following keywords on the GoogleScholar database: cognitive impairment post electroconvulsive therapy, cognitive effects of electroconvulsive therapy, electroconvulsive side effects, ECT.

Results: Most of the studies on cognitive disorders after ECT have focused on mnemonic abilities, in particular the deterioration of anterograde memory which is at its maximum just after the session and which recovers progressively and spontaneously. The deterioration of retrograde memory, on the other hand, depends on the administered dose, the type and the location of the electrodes, and has a greater tendency to affect recent memories than old ones.

Other studies have focused on the speed of the process of information, which is also affected, with a significant decrease, especially in depressed people, a decrease that can be progressively resolved with time. Concerning attentiveness, some studies have noted a minimal decrease, especially in the lateral visual fields, and a perseveration in verbal expression. These studies also noted a deterioration of executive functions with a decrease in performance on the STROOP and MTM tests and also in verbal fluency.

Conclusions: The occurrence and preservation of cognitive deficits after ECT is a much debated subject with many controversial studies, and despite the numerous studies on this subject, we are still far from conclusive and exploitable results, especially with the intricacy of the diversity of parameters, materials and techniques of

ECT, and also because of other factors such as individual peculiarities, neurological co-morbidities, and polymedication to psychotropic drugs.

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Non-convulsive epileptic seizure after electroconvulsive therapy session

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Introduction: Electroconvulsive therapy (ECT) is a procedure performed under general anaesthesia involving triggering an intentional brief seizure through small electrical currents through the brain. The anaesthetic depth should be adequate prior to shock and measured with BIS, a processed electroencephalogram (EEG) monitor. Adjusting the hypnotic dose allows to decrease the ictal threshold and thus improve the response to treatment and decrease side effects.

Objectives: Our goal is detecting elements such as spontaneous epileptiform activity after ECT without tonic-clonic activity with the spectral density matrix (SDM).

Methods: Our patient: an 87-year-old woman, diagnosed with F20.2 catatonic schizophrenia and under antipsychotic treatment since her youth. She has required multiple hospital admissions due to psychopathological decompensations until starting monthly maintenance ECT sessions in 2014. Since then she no new hospital admissions have been required.

Results: Images 1D and 1E shows the SDM, a spectrogram of the EEG. The X axis show time (minutes), the Y axis shows the frequency (Hz) and the Z axis shows the energy or intensity of that electrical activity in the frequency bands replaced by colors: warm colors (red) reflecting high intensity electroencephalographic activity and cool colors (yellow, blue and green), low activity. Images 2 and 3's EDM shows spontaneous epileptiform activity after electroconvulsive therapy without tonic-clonic activity. We observed an initial EDM of an awake patient, with warm colours in practically all frequency bands, including the beta band (13-30 Hz), characteristic of waking states. Around 9:50 anaesthetic induction occurs, activity increases in slow frequencies (red colours in alpha, theta and delta), plus an increase of cold colours in beta, reflecting the disappearance of brain activity in that frequency. The asterisk reflects the EEG response to the electrical discharge, followed by a postcritical state with brain activity exclusively in slow waves and high amplitude (delta and some theta) and absence of activity in other frequencies (blue colour in the beta and alpha bands) around 9:57. At about 10:00 there is an abrupt appearance of high intensity brain activity (warm colours) in beta and alpha and delta, mainly, reflecting spontaneous epileptiform activity after treatment and clinically reflected as a patient absent and disconnected from the environment, but without tonic-clonic activity. New postcritical state in which blue colour predominates, reflecting