

**Methods:** Cognitive functions of patients who undergo ECT was assessed prior to start of treatment, midway of the course of treatment and after end of the course of treatment using Montreal Cognitive Assessment (MoCA). We did a retrospective analysis of MoCA scores of 15 patients who received bilateral ECT in 2017-2018. In order to assess the efficacy of ECT in the treatment of their illness, we did a retrospective analysis of Montgomery Asberg Depression Rating Scale (MADRS) scores of 18 patients who received bilateral ECT in 2017-2018

**Results:** Only 7% of the patients who underwent ECT in our sample did have significant cognitive decline as per their MoCA scores. 28% of patients achieved complete remission in their depressive symptoms. 22% of patients continued on maintenance treatment. 95% of patients showed significant improvement in their symptoms following treatment with ECT where their symptoms reduced to either mild or minimal depressive symptoms.

**Conclusions:** Cognitive side effect was not a significant side effect in our sample of patients. We did see an improvement in cognitive function in a significant number of the sample of patients as they progressed with treatment, which coincided with improvement in their affective symptoms.

**Keyword:** ECT; MOCA; MADRS; Cognitive functions

### EPP1077

#### Electroconvulsive therapy use in psychiatric hospitalizations - a nationwide descriptive study.

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**Introduction:** Despite being one of the oldest treatments in the field of Psychiatry, Electroconvulsive therapy (ECT) is used worldwide for various severe and treatment-resistant psychiatric disorders, establishing itself as one of the fastest and most effective treatments.

**Objectives:** The primary aim of this study was to describe a nationwide epidemiological perspective of the use of ECT in hospitalized psychiatric patients. The secondary aims were to characterize clinical and sociodemographic trends of hospitalized patients who needed ECT.

**Methods:** A retrospective-observational study was conducted using an administrative database which gathered all hospitalizations registered in Portuguese public hospitals from 2008 to 2015. We selected all hospitalizations with a procedure code 94.27 - Other electroshock therapy defined by the International Classification of Diseases version-9, Clinical Modification. The variables included in the study were birth date, sex, residence address, primary and secondary diagnoses, admission date, discharge date, length of stay (LoS), discharge status from each single hospitalization episode.

**Results:** There were a total of 879 hospitalizations with ECT during the 8-year period of the study. Most of the hospitalizations occurred in female patients (53.4 vs 46.6%), belonging to the age group of 51-70 years old, with a mean age of 50.5 years old. The median LoS was 43.0 days with an IQR of 27.0-68.0 days. The specific primary diagnosis most frequent in all hospitalizations was Major depressive disorder, recurrent episode representing 19.6% of all ECT related hospitalizations.

**Conclusions:** In Portugal most of the patients who received ECT were women above middle age, and depressive disorders were the most common indication.

**Keywords:** Electroconvulsive therapy; Mental Health Data; Neuromodulation

### EPP1078

#### Vns as alternative treatment for maintenance ect in a patient with treatment resistant depression - a case study

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**Introduction:** Vagus Nerve Stimulation (VNS) is a neuromodulatory intervention which involves attaching an electrode to the vagus nerve. Studies investigating VNS as an acute treatment method for treatment resistant depression have shown very limited results, however there are data suggesting that VNS might have a beneficial effect on a longer term. There are also studies that suggest that a history of response to ECT might indicate a higher response rate to VNS. VNS was suggested as treatment for a patient who received maintenance ECT for treatment resistant unipolar depression during 9 years. 3 months after VNS was implanted, ECT was stopped due to the Covid-19 pandemic. In this case study we will review the patient's response to treatment with VNS and the sudden stop of long-term ECT treatment.

**Objectives:** To review the response to acute and maintenance ECT and VNS in this patient diagnosed with treatment resistant unipolar depression, and to compare this to the data suggesting VNS as an alternative treatment method for maintenance ECT in patients with treatment resistant depression.

**Methods:** Using the extensive data collected during the patient's treatment, we will review the clinical response and side-effect burden of this patient to acute and maintenance ECT and to VNS.

**Results:** The patient showed a vast improvement in depressive symptoms a few months after start of VNS treatment, while long-term maintenance ECT was stopped.

**Conclusions:** This patient's response to VNS supports the data suggesting VNS as an alternative treatment method for maintenance ECT in patients with treatment resistant depression.

**Conflict of interest:** This patient received VNS treatment as part of a study conducted in our centre (UPC KULeuven) with support of Livanova. Me nor my supervisor (prof. Sienaert Pascal) are directly involved in this study. I have received no financial or other compensation fr

**Keywords:** VNS; ECT; Treatment Resistant Depression; Case study

### EPP1080

#### Tourette's syndrome: Alternative approaches to a clinical case refractory to conventional therapy

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**Introduction:** Tourette's syndrome is a neuropsychiatric disorder marked by motor and phonic tics frequently associated with psychiatric comorbidities, beginning in childhood. While most cases improve or resolve with age, some are refractory.

**Objectives:** To review new strategies for the management of Tourette's Syndrome, following an outpatient clinical vignette.

**Methods:** We performed a review based on the PubMed® database.

**Results:** A 50-years-old female patient with a long-term outpatient psychiatric follow-up presented with motor tics appearing in adolescence, including winking and facial grimacing, as well as episodes of coprolalia. Over the years, she developed an anxiety disorder and social isolation. In addition to psychological therapy, pharmacological therapy had already been approached with the use alpha-adrenergic agonists and several antipsychotics, such as risperidone and aripiprazole, with the patient showing only partial response to pimozide. In Tourette's syndrome, the therapy must be adequate to the patient's individual needs. Emerging treatments for refractory cases, such as anticonvulsants, cannabinoids or antiglutamatergic drugs have been the target of several studies. Botulinum toxin injections are particularly effective in patients with focal motor tics and complex phonic tics. Non-pharmacological treatment options, such as electroconvulsive therapy and deep brain stimulation may prove effective in some cases.

**Conclusions:** A significant proportion of patients fail to respond to conventional strategies. Thus, new pharmacological and non-pharmacological therapies are on the horizon and may represent an important step in treatment algorithms for refractory cases in the future.

**Keywords:** Deep brain stimulation; antiglutamatergic; Tourette syndrome; Tics

## EPP1081

### Predictors of response to electroconvulsive therapy and its importance in the treatment of patients with obsessive-compulsive disorder

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**Introduction:** Electroconvulsive therapy (ECT) presents itself as a highly effective therapeutic approach in various psychiatric conditions, especially affective disorders and catatonia. Although obsessive-compulsive disorder (OCD) is not an established indication for ECT, there are several positive results that have been replicated, giving us an account of its potential applicability.

**Objectives:** To emphasize the importance of defining predictors of response to ECT in OCD.

**Methods:** The authors' clinical experience is combined with the review of clinical cases, available in the literature, related to the application of ECT in OCD.

**Results:** Personal or family history of affective pathology and obsessions of sexual content were identified as potential predictors of response to ECT in patients with obsessive and compulsive symptoms.

**Conclusions:** Although preliminary and based solely on case reports, the replicability of results should promote special attention to situations in which OCD is marked by particular characteristics that favor the response to ECT. In this way, it would be possible to prevent the dragged consumption of health resources and minimize the expected chronicity associated with this clinical condition.

**Keywords:** obsessive-compulsive disorder; Electroconvulsive therapy

## EPP1082

### Cortical excitability and its modulation in obsessive-compulsive disorder - a systematic review

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**Introduction:** Obsessive-Compulsive Disorder (OCD) is an incapacitating Neuropsychiatric condition characterized by the presence of obsessions and/or compulsions. Although the disorder's phenotype is well described, its pathophysiology remains elusive (Aouizerate et al, 2004). Over the last decade, techniques to noninvasively study the brain's neurophysiology, such as Transcranial Magnetic Stimulation (TMS), have found widespread use in psychiatric research. For OCD, single- and paired-pulse TMS protocols have been used to explore abnormalities in motor cortex excitability and cortical neuroplasticity. Here we propose to systematically review and, where possible, meta-analyse existing case-control studies that compared such measures in patients and healthy subjects.

**Objectives:** To systematically review and meta-analyse published case-control studies comparing cortical excitability measures, as measured by single- or paired-pulse TMS, in subjects with OCD and healthy controls.

**Methods:** We have conducted a systematic review of published literature (PROSPERO registration CRD42020201764) reporting measures of cortical excitability as measured by single or paired-pulse TMS, in patients with OCD and healthy controls. We searched 4 different electronic libraries (PubMed, Web of Science, EMBASE, PsycINFO). The resulting list of articles was reviewed, separately, by two researchers. Disagreements were discussed and resolved by consensus, until a final list of eligible articles was obtained.

**Results:** 13 studies reporting motor cortex excitability measures were included in our final list. The total number of participants included in our analyses is 615 (349 OCD; 180 healthy subjects; 86 other conditions)

**Conclusions:** A sufficient number of studies was found to allow for meta-analyses, currently ongoing.

**Keywords:** Obsessive-Compulsive disorder; transcranial magnetic stimulation; Neurophysiology; Cortical excitability