

Objectives: The current study had the initial goal to check the effect of theta tACS on accuracy and resting state EEG in a set of match-to-sample WM tasks.

Methods: In the first experiment, we tested 31 participants in the WM task after 20-min tACS applied at Fpz and CPz at 6 Hz, 1 mA. In the second experiment, we compared the after-effects and online effects of the stimulation in a sample of 25 individuals. Five similar 25-min blocks filled with the same working memory task were distributed over 3 days. We assessed the same group of participants in all three sessions. On the Training day, the participants performed one block without stimulation. On the Sham-Verum day (SV), the first block with Sham stimulation followed by the second block with Verum stimulation. On the Verum-Sham day (VS), the blocks order reversed.

Results: After-effects of the stimulation did not produce any significant changes either in behavior (accuracy in the task) or resting-state EEG (theta frequency band spectral power in the first experiment. In the second experiment, 6 Hz tACS delivered before the WM task was not able to produce any observable changes in working memory performance. The same hold true for online stimulation.

Conclusions: Theta frequency tACS applied to Fpz-CPz electrodes is not an efficient method to improve WM.

Keywords: Working memory; EEG; tACS

EPP1074

An hiv infection - a problem of quality of life!?

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Introduction: The quality of life is a multidimensional and subjective construct, based on the patient's experience.

Objectives: The objective of this study is to observe if at the HIV - positive patient the quality of life in relation to health is a consequence of disease and treatment and if his perception about the disease changes his ability to have a full and useful life.

Methods: We centralized the data coming from a number of 600 patients registered in the Iasi Regional Center, for a period of 12 months. The side effects reported by the patients emerged from discussions with the infectious diseases specialist and the psychologist.

Results: From 600 patients, 59% of them were male with mean age of 21.1 years old. Approximately 14% of the patients had stable jobs, the rest were unemployed or had part-time jobs. 38% came from foster care units or from broken homes. The average number of days of hospitalization was 4 days, 25% of them were at their first scheme, 10% in the seventh-eighth scheme. Among the antiretroviral side effects patients complained nausea and vomiting in 85% of cases, lipodystrophy symptoms in 25% of cases, diarrhea in 15% of the cases; regarding the psychological aspects, 65% of patients showed an above level of anxiety, 40% had depressive manifestations, 10% had specific obsessions-compulsions and 10% neurotic and hysterical tendencies.

Conclusions: We need a close collaboration between the infectious diseases specialist and the psychologists in order to enhance the quality of life of the HIV patient.

Keywords: quality of life; side effects; antiretroviral therapy; HIV/AIDS

EPP1075

Ssri-treated psychiatric disorders prediction with AI

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Introduction: SSRI-treated psychiatric disorders (STPD), such as general anxiety disorder and major depression disorder, are common psychiatric diagnoses. Serotonin-mediated effects of solar insolation are an active topic of research. Artificial intelligence (AI) could help to better examine that complex relation.

Objectives: To investigate whether AI could predict the STPD relying primarily on average ambient temperature and annual solar insolation.

Methods: Data of age, average ambient temperature and annual solar insolation were employed to predict STPD status in 7,587 subjects using an AI. To simplify the data analysis, only individuals with white ethnicity were assessed. STPD prevalence was 17.1%. The AI was conservatively tuned to maximize the positive likelihood ratio considering predicted and real STPD statuses. The free and open source programming language R was used for all the analyses. Dataset source: Wortzel, Joshua; Kent, Shia; Avery, David; Al-Hamdan, Mohammad; Turner, Brandon; Norden, Justin; Norden, Michael; Haynor, David (2018), "Data for: Ambient temperature and solar insolation are associated with decreased prevalence of SSRI-treated psychiatric disorders", Mendeley Data, V1, doi: 10.17632/trs43ybh92.1

Results: Predictions obtained a positive likelihood ratio of 4.850. The results were indicative of fair performance.

Conclusions: AI might be useful to predict STPD. Furthermore, the results of this study might indicate a moderate effect of age, average ambient temperature and annual solar insolation on the probability of STPD occurrence. Finally, the AI used in this study is freely available, allowing anyone to experiment.

Keywords: mood disorders; anxiety disorders; Artificial Intelligence; serotonin

Psychosurgery & stimulation methods (ECT, TMS, VNS, DBS)

EPP1076

Assessment of cognitive function following a course of electroconvulsive therapy

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Introduction: ECT is a potentially life-saving treatment for patients with severe or treatment resistant depression. Cognitive function disturbances following ECT are generally transient, but could be of longer duration in some cases

Objectives: To assess the cognitive side effects in patients with affective disorders treated with a course of electroconvulsive therapy (ECT).

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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