Psychopharmacology and Pharmacoeconomics 02 / Psychosurgery & Stimulation Methods (ECT, TMS, VNS, DBS) / Research Methodology

EPP0401

What is the link between the antidepressants, the transcranial magnetic stimulation and the peripheral vascular endothelial growth factor?

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Introduction: Vascular endothelial growth factor (VEGF) has been implicated in mediating the effect of antidepressants (AD) and electroconvulsive therapy on depression since it plays a significant role in the neurogenesis. However, the serum VEGF level has not been investigated so far in association with rTMS treatment in patients with major depressive disorder (MDD).
Objectives: The aim of our study was to compare the effect of the antidepressants and of the repetitive transcranial magnetic stimulation on the serum vascular endothelial growth factor and its association with the responsiveness to the treatments.
Methods: A dataset of 50 patients with TRD who were treated with AD (n=33) and bilateral rTMS for 2x5 days (n=17) was analysed (sample 'rTMS&AD'). Montgomery-Asberg Depression Scale (MADRS) was used for monitoring the symptom changes. The serum VEGF levels and symptoms were assessed on the first (V1), on the 14th (V2) and on the 28th day (V3). The VEGF levels were measured by ELISA assay.
Results: The baseline VEGF levels were significantly higher in non-responders both in the rTMS&AD (p=0.04) and AD samples (p=0.02) compared to responders. The MADRS reduction and the changes in VEGF levels between V1 and V3 were significantly associated in responders only in the AD&rTMS sample (p=0.03). The baseline VEGF level has been proven as a significant predictive factor of treatment response in the total sample (p=0.018).
Conclusions: The baseline VEGF level can be a predictive factor to be a non-responder to different treatments. Change of the VEGF level is associated with the improvement of depressive symptoms only due to rTMS.

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Keywords: depression; rTMS; non-responders; treatment resistant depression; VEGF

EPP0403

Non-participation to a longitudinal and interventional survey on the psychological impact of the COVID-19 pandemic among healthcare workers (PSYCOVER) in France

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Introduction: We conducted a national longitudinal survey among healthcare workers in the context of the Covid-19 pandemic, (1) to assess mental health and (2) to describe the results of an intervention to improve capacity of resilience. Non-participation is rarely studied despite being an important methodological matter when performing studies on mental health.
Objectives: The study aims to describe and identify the factors associated with non-participation of healthcare workers to the intervention part of a national longitudinal study on the psychological impact of the COVID-19 pandemic.
Methods: Participants were recruited from April to October 2021 via an Internet link widely disseminated. Data collected include participant' socio-demographic, occupational and working conditions, general health, professional burnout and mental health. The intervention proposed the use of tools for self-management of stress and resilience (PsySTART-Responder® and Anticipate.Plan.Deter™ program). A robust Poisson regression was used to identify factors associated with non-participation.
Results: Among 724 participants, 41% participated to the intervention part. Factors associated to non-participation to the intervention were to work with few or no COVID-19 patients, and low scores in the anxiety scale. Social determinants, occupational characteristics or general health were not associated with non-participation.
Conclusions: Our study provides a better understanding of the participation of healthcare workers that was not frequently studied. The results logically suggest lower participation among those with better mental health and not directly concerned with management of COVID-19 patients. Non-participation to the intervention was not associated with social factors, which is an argument in favour of using such a design/intervention in a socially heterogeneous population.

Disclosure: No significant relationships.
Keywords: healthcare workers; Covid-19 pandemic; non-participation to a survey; longitudinal survey on mental health

EPP0404

The impact of depression in Alzheimer's disease hospitalized patients: a study protocol for a nationwide retrospective study

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Introduction: Alzheimer's disease (AD) is the leading cause of dementia worldwide. About 40-50% of AD patients are also affected by depression, with mounting evidence suggesting its association with worse disease prognosis and negative outcomes, such as lower quality of life, higher mortality and more hospitalizations. However, few studies have specifically measured the association of depression with AD hospitalization outcomes.
Objectives: To characterize depression among all hospitalizations with a registered diagnosis of AD and to explore its association with hospitalization outcomes, including in-hospital mortality, length of stay and discharge destination.
Methods: A retrospective observational study will be conducted following the RECORD statement. A Portuguese nationwide hospitalization database from all mainland public hospitals will be used. Episodes of inpatients ≥65 years old with a primary or secondary diagnosis of AD (ICD-9-CM code 331.0), discharged between 2008-2015, will be selected. Codes 296.2X, 296.3X, 300.4 and 311 will be used to identify episodes with a concomitant registry of depression at any diagnostic position. Descriptive, univariate and multivariate approaches will be used.
Results: A total of 61 361 episodes complying with the fixed criteria will be assigned to one of two groups (with vs without depression). Groups will be compared regarding sociodemographic characteristics, comorbidity profile, type of admission (planned vs urgent) and hospitalization outcomes. Results regarding the association of depression and outcomes will be presented as crude and adjusted odds ratios (OR).
Conclusions: With this nationwide analysis, we expect to contribute to the clarification of depression impact on AD hospitalizations, so that best-practice care may be provided to these patients.

Disclosure: No significant relationships.
Keywords: Alzheimer's disease; Depression; Administrative Database; Hospitalization outcomes

EPP0405

Safety of concomitant tranylcypromine treatment during electroconvulsive therapy (ECT) series

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Introduction: Tranylcypromine (TCP), an irreversible monoamine oxidase inhibitor (MAOI), is recommended for difficult-to-treat depression. Besides the requirement of a low-tyramine diet, there are concerns about the safety of TCP treatment during anaesthesia and electroconvulsive therapy (ECT). For safety reasons, many psychiatrists prefer to terminate TCP before ECT.
Objectives: To assess the safety of tranylcypromine treatment during ECT series in patients with difficult-to-treat depression (DTD).
Methods: In this retrospective study we report on n=19 patients, who were treated with tranylcypromine during the ECT series. ECT parameters, clinical and safety data were obtained from our clinical database.
Results: Mean age of patients was 51 years (range 29-77) at time of the first ECT sessions. 58 % (n=11) of patients were female. In total, 198 ECT sessions were analysed (mean 11, median 9,5 per patient). Mean TCP dose was 44 mg at time of first ECT (median 43). Concomitant TCP and ECT treatments were well tolerated during the entire ECT series. In one case TCP treatment was discontinued due to self-limiting bigeminus during the ECT session. In another case TCP and other drugs as well as the ECT series were stopped after the patient developed delirium. At the end of ECT series the mean TCP dosage was 37 mg.
Conclusions: Tranylcypromine appears to be safe during ECT series and does not necessarily have to be terminated prior to electroconvulsive therapy.

Disclosure: No significant relationships.
Keywords: Electroconvulsive therapy; ECT; Tranylcypromine; MAOI

EPP0406

Late 1800s Fringe Electrotherapeutic Devices: Comparative Electrical Capabilities

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Introduction: Desperation for cure led to 19th century invention--electrotherapeutic devices; replete with hyperbolic claims of cure-all, perceived ineffectiveness, and potential harm rendered the modality as quackery but were used in early brain stimulation, melancholia treatment, and cortex mapping. Here, antique devices are restored, and their electrophysiological qualities ascertained.
Objectives: Determine the comparative capabilities of these devices in delivering electrostimulation and compare with modern standards to understand possible electrophysiological sequelae.
Methods: Devices known as "medical batteries" were analyzed. Power delivery utilized a "voltaic battery", simple circuit, and a conductor wrapped around an iron core. When the circuit is energized, the core is magnetized by direct current of the battery which induces an alternating current that electrifies probes used on the body. Due to their marked age, a common 9-volt battery was exchanged for the corrosive dry cell paste batteries. Electrical parameters were then measured.