

months decreased from 0.17 to 0.11 after VNS implantation. 6 of 8 patients were offered maintenance esketamine treatment. Mean MADRS at 12-months was 19 (38.5 % MADRS reduction). The need of mean esketamine treatment sessions decreased from 2.3 at 6-months visit (V6) to 1.37 at V9 and 0.96 at V12 respectively. Termination of maintenance esketamine was possible in 4 cases after a mean of 11.5 months.

Conclusions: Combination of esketamine and VNS is a safe and effective treatment option in severely ill DTD patients to relieve disease severity and reduce hospitalizations. Need of esketamine treatment sessions decreases 6 months after VNS implantation.

Disclosure of Interest: None Declared

EPP0248

Effect of repetitive transcranial magnetic stimulation on chronobiological hypothalamic-pituitary-thyroid axis activity in major depression

F. Duval*, M. C. Mokrani, V. Danila, A. Erb, F. Gonzalez Lopera and M. Tomsa

Pole 8/9 - Psychiatry, Centre Hospitalier, Rouffach, France

*Corresponding author.

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Introduction: We previously demonstrated that the difference between 11 PM and 8 AM TSH response to protirelin (TRH) tests on the same day ($\Delta\Delta$ TSH test) is an improved measure in detecting hypothalamic-pituitary-thyroid (HPT) axis dysregulation in depression. This chronobiological index is normalized after successful antidepressant treatment.

Objectives: The present study aimed at assessing the effects of repetitive transcranial magnetic stimulation (rTMS) of the left dorsolateral prefrontal cortex (DLPFC) on the HPT axis activity in treatment resistant depressed inpatients (TRDs) (defined as having at least 2 treatment failures).

Methods: The $\Delta\Delta$ TSH test was performed in 13 TRDs and 14 healthy hospitalized control subjects (HCs). To be enrolled in this study, patients had to show reduced $\Delta\Delta$ TSH values (i.e., < 2.5 mU/L) at baseline (BL). After 20 sessions of rTMS (using daily theta-burst stimulation; 100% resting motor threshold; number of pulses/session: 900), the $\Delta\Delta$ TSH test was repeated in all inpatients. The 17-item Hamilton depression rating scale (HAM-D) was used to assess the severity of depression. Remission was defined by a final HAM-D score ≤ 8 .

Results: Compared to BL, HAM-D scores decreased and $\Delta\Delta$ TSH values increased after 20 sessions of rTMS (both $p < 0.05$ by T-test). There was a relationship between the reduction in HAM-D scores from BL to endpoint and the increase in $\Delta\Delta$ TSH values ($\rho = -0.64$; $n = 13$; $p = 0.018$). At endpoint, 7 patients showed $\Delta\Delta$ TSH normalization (among them 6 were remitters), while 6 patients did not normalize their $\Delta\Delta$ TSH (all were non-remitters) ($p < 0.005$ by Fisher Exact test).

Conclusions: Our results suggest that after 20 sessions of rTMS, chronobiological restoration of the HPT axis activity is associated with clinical remission. Further investigation of the specific effects of rTMS on the HPT axis activity in TRDs is warranted.

Disclosure of Interest: None Declared

EPP0249

Non-invasive brain stimulation and cognitive function in patients with major depressive disorder or bipolar depression: systematic review and meta-analysis

J. Mutz^{1*} and M. Kiebs²

¹King's College London, London, United Kingdom and ²University Hospital Bonn, Bonn, Germany

*Corresponding author.

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Introduction: Non-invasive brain stimulation protocols are effective treatments for depressive episodes. Although the cognitive adverse effects of electroconvulsive therapy (ECT) are well documented, evidence regarding the cognitive effects of repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) is mixed.

Objectives: The aim of this study was to synthesize research on the cognitive effects of non-invasive brain stimulation protocols and to differentiate between studies of major depressive disorder (MDD), bipolar depression and mixed populations.

Methods: Following a systematic literature search of multiple electronic databases, a series of meta-analyses were conducted to estimate standardized mean differences (SMD) between pre- and post-treatment cognitive functioning across nine cognitive domains. Where possible, SMDs were estimated separately for MDD, bipolar depression and mixed populations. In studies that included both patients with MDD and bipolar depression, the percentage of patients with a diagnosis of bipolar depression was tested as a potential moderator.

Results: More than 150 treatment arms were included in the analyses. For ECT, we observed a small decline in language functioning and a decrease in autobiographical memory scores. There was no evidence of pre-post differences across other cognitive domains. For rTMS and tDCS, small to moderate cognitive improvements were observed for several cognitive domains, for example for executive functioning. Across most analyses, between-study heterogeneity was high and could not be accounted for by differences between MDD, bipolar depression or mixed populations.

Conclusions: There was limited evidence that differentiation between studies of MDD, bipolar depression and mixed populations accounted for between-study heterogeneity in analyses of pre-post differences in cognitive functioning. Given that most studies included both patients with MDD and bipolar depression, this finding should be treated as preliminary. Across all the treatment protocols examined, more data are needed to investigate the cognitive effects of non-invasive brain stimulation in patients with bipolar depression.

Disclosure of Interest: None Declared

EPP0250

Knowledge and Attitudes about Transcranial Magnetic Stimulation among Psychiatrists in Oman: A cross sectional study

M. K. Albalushi

psychiatry, Oman medical specialty board, Muscat, Oman

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Introduction: Background and Objective: Repetitive transcranial magnetic stimulation (rTMS) is a noninvasive treatment method

and the only been approved for medication refractory depression by US Food and Drug Administration (FDA). However, comprehensive knowledge about rTMS is not yet widespread among psychiatrists. The aims of this study were to assess psychiatrists' knowledge of and attitudes toward rTMS and to determine the contributing factors on knowledge of rTMS in Oman.

Objectives: A quantitative observational cross-sectional study will be conducted using an online survey. Demographic information, knowledge of and attitudes towards rTMS measures were collected. Both univariate analysis, multiple linear regression was performed to identify the risk factors associated with knowledge levels.

Methods: A quantitative observational cross-sectional study will be conducted using an online survey. Demographic information, knowledge of and attitudes towards rTMS measures were collected. Both univariate analysis, multiple linear regression was performed to identify the risk factors associated with knowledge levels.

Results: A total of 50 psychiatrists participated in this study (response rate = 83%). The average age of the participants is 32.7 ± 4.3 years [26.0-41.0], more than half of them were females ($n=28$, 56.0%), and resident (Junior/Senior) ($n=25$, 50.0%). The majority of the samples are Omani ($n=45$, 90.0%), working in the tertiary hospital ($n=38$, 76.0%). The average scores on knowledge of and attitudes towards rTMS in this sample were 14.5 ± 3.8 and 22.5 ± 6.3 , respectively. Linear model showed that senior residents and above had a higher knowledge level than junior residents ($\beta=4.65$, $p<.001$). Those samples with the rTMS device in their work-place had a higher knowledge level than don't have ($\beta=1.88$, $p=0.027$).

Conclusions: Three factors have a directional effect on the level of knowledge among psychiatrists toward rTMS, namely, higher educational level, presence of rTMS device at the workplace and availability of standardized training in Rtms.

Disclosure of Interest: None Declared

EPP0251

Attitude regarding electroconvulsive therapy among psychiatric patients

M. Ayub

Psychiatry, Pak International Hospital, Karachi, Pakistan
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Introduction: Electroconvulsive therapy (ECT) is one of the few non-pharmacological stimulation treatment which is cost effective, efficacious and lifesaving in various psychiatric disorders. Although myths and misconceptions prevailed in a society undermine the usefulness of such treatment.

Objectives: Attitude towards Electroconvulsive therapy (ECT) among psychiatric patients.

Methods: It was a descriptive cross-sectional study conducted at the Department of Psychiatry and Behavioural sciences, Jinnah Post-graduate Medical Centre (JPMC), Karachi from 22-Oct-2019 to 21-April-2020 and a total of 250 psychiatric patients were enrolled. Methode; Attitudes toward ECT were assessed using ECT attitude questionnaire⁶ (Annexure III). A 15 items questionnaire, each item has three alternatives based on which responses were categorized into positive, negative, or ambivalent attitudes. Mean score was calculated for each.

Patients who were given 8 positive answers out of 15 were labeled as having a positive attitude. Patients who were given 8 negative

answers out of 15 were labeled as having a negative attitude. Patients who were given 8 I don't know answers out of 15 were labeled as having ambivalent attitude.

Inclusion Criteria: Age 18-65 years

Either gender

Psychiatric patients, having awareness regarding their nature of illness and could give consent for study.

Patients with duration of illness >3 months.

Exclusion Criteria: Psychiatry patients who have no awareness regarding their illness.

Patients with impaired cognitive

Results: Forty-four (45.83%) patients had positive attitude, 36 (37.50%) had negative attitude and 16 (16.67%) had ambient attitude.

Further stratification was also performed on the basis of educational status, occupational status, duration of illness, psychiatric diagnosis, and previous experience of ECT. There was no significant association was found of these variables with attitude regarding ECT.

Mean age was 39.58 ± 12.48 years included in this study. There were 55 (57.29%) female and 41 (41.71%) male patients. There were 72 (75.00%) patients were household workers, 04 (4.17%) students, 06 (5.25%) unskilled labour, 3 (3.13%) skilled labour, 10 (10.42%) professionals and just 01 (1.04%) were law enforcement worker. 19 (19.79%) patients were diagnosed with schizophrenia, 62 (64.58%) were diagnosed with unipolar depression and 15 (15.63%) were diagnosed with bipolar disorder. Source of ECT information was 11 (11.46%) electronic media, 09 (9.38%) print media, 19 (19.79%) social media and 57 (59.38%) was from health professionals. Forty-four (45.83%) patients had positive attitude, 36 (37.50%) had negative attitude and 16 (16.67%) had ambient attitude.

Conclusions: Knowledge regarding electroconvulsive therapy (ECT) was low in psychiatric patients in Pakistan. Only 45.83% patients showed positive attitude towards ECT.

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EPP0252

Neural plasticity in schizophrenia: An integrated approach for rehabilitation by means of tms and cognitive remediation training

S. Torriero^{1*}, C. Gesi¹, A. Vergallito^{1,2}, C. Mencacci¹ and B. Dell'Osso^{3,4,5}

¹ASST Fatebenefratelli Sacco; ²Department of Psychology, University of Milan Bicocca; ³Department of Biomedical and Clinical Sciences Luigi Sacco; ⁴“Aldo Ravelli” Center for Neurotechnology and Brain