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

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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 (ΔΔTSH 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 ΔΔTSH test was performed in 13 TRDs and 14 healthy hospitalized control subjects (HCs). To be enrolled in this study, patients had to show reduced ΔΔTSH 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 ΔΔTSH 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 ΔΔ 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 ΔΔTSH values (rho = -0.64; n = 13; p = 0.018). At endpoint, 7 patients showed ΔΔTSH normalization (among them 6 were remitters), while 6 patients did not normalize their ΔΔTSH (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

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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

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