memory and attention, both related to hippocampal and cerebellar activity. Overall, further investigation is necessary to determine the various ways of the both drugs performance in the brain.

S54. THE ROLE OF THE CLINICAL PHARMACIST IN DRUG EDUCATION FOR INCREASING COMPLIANCE WITH DRUG THERAPY IN THE PERIOD OF DISCHARGE WITH THE DIAGNOSIS OF SCHIZOPHRENIA SPECTRUM DISORDERS

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Background: The inability to achieve full compliance with drug treatment during the post-discharge period with exacerbations in the illness in patients with schizophrenia and other psychotic disorders is a major problem for the patients themselves, their families, and the healthcare staff in psychiatry.

Methods: In this prospective study, it was aimed to evaluate whether the written and verbal drug education (drug color and shape, interactions, side effects, etc.) given by the clinical pharmacist during the discharge period had an effect on drug compliance. Between 1st September 2016 and 12th June 2017, 40 patients diagnosed with schizophrenia, schizoaffective disorder, schizotypal personality disorder or acute schizophrenia-like psychotic disorder according to ICD-10 diagnostic criteria who were admitted to Hacettepe University Faculty of Medicine, Department of Psychiatry Inpatient Service, were involved in this study. A number of scales were used to evaluate the severity of illness, drug side effects and drug compliance respectively; PANSS, UKU, SAS, BARS, AIMS; MARS and ROMI. It has been emphasized during discharge to the patients by the clinical pharmacist that how important administering the prescribed drugs used (r: -0.316; p<0.05). When the factors that may affect compliance were examined by multiple regression analysis, akathisia was found to have the greatest impact on compliance. A decrease in the baseline MARS score was related to an increase in the total drug compliance (β: -0.389, p: 0.002, F: 0.750).

Results: There was a statistically significant increase in compliance with treatment as quantitatively assessed by the MARS after drug education (p<0.001). There was no significant correlation between compliance and gender, age, tobacco/alcohol use or marital status. At the same time, a significant correlation between severity of akathisia obtained through BARS and a decrease in MARS scores representing the level of compliance was observed (r: -0.367; p<0.05). A decrease in the baseline MARS score was related to an increase in the total number of hospitalizations (r: -0.325; p<0.05) and the number of psychotrophic drugs used (r: -0.316; p<0.05). When the factors that may affect compliance were examined by multiple regression analysis, akathisia was found to have the highest impact on compliance (β: -0.389, r2: -0.002, F: 0.750).

Discussion: These results support the literature in terms of the importance of the impact of side effects on compliance. As a result of the study, it was seen that drug counseling services given by clinical pharmacists can effectively be employed in psychiatric care, for the rational use of medicines. It appears that it is necessary to take advantage of drug counseling on drug use and to develop strategies to improve drug compliance in psychiatry.

S55. MECHANISTIC BASIS OF FRONTO-TEMPORAL TRANSCRANIAL DIRECT CURRENT STIMULATION ON AUDITORY VERBAL HALLUCINATION IN SCHIZOPHRENIA: A MEDIATION ANALYSIS OF COROLLARY DISCHARGE

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Background: Corollary discharge (CD), ubiquitous throughout the animal kingdom, refers to suppression of sensory consequences arising from self-generated actions. Complex motor acts like covert/overt speech are associated with corollary discharge that helps in ascertaining agency. Auditory verbal hallucinations (AVH) are hypothesized to originate due to failure of corollary discharge in auditory processing system. Transcranial Direct Current Stimulation (tDCS), as an add-on treatment, has been reported to significantly reduce severity of persistent AVH in schizophrenia patients. In this study, we describe mediation analysis findings that strongly support a role for amelioration of corollary discharge deficits as a mechanistic basis for tDCS effects on AVH in schizophrenia.

Methods: 27 DSM-IV-TR Schizophrenia patients (SCZ) with persistent AVH despite adequate antipsychotic treatment and 27 healthy controls (HC) underwent neurophysiological assessment for CD. In an event-related potential task, N1 component that reflects cortical responsiveness of auditory cortex to sounds, was elicited and examined in two conditions - i) Talk (with online auricular feedback of self-spoken speech sounds) and ii) Listen (passive playback of recorded self-spoken speech sounds). Corollary discharge index (CDI) was calculated by subtracting Listen condition N1 amplitude from Talk condition N1 amplitude (at FCz). Among these 27 patients, 13 patients participated in a randomized, double-blind, sham-controlled study examining the effect of add-on tDCS on AVH and CDI [5 consecutive days, twice-daily, 20-minute sessions; 2mA; anode: left dorsolateral prefrontal cortex; cathode: left temporo-parietal junction]. Mediation analysis was modelled with tDCS type (Verum vs. Sham) as independent variable, percent change in auditory hallucination rating scale score (AHRS) as dependent variable and percent change in CDI as the mediator. As recommended for small samples, bootstrap estimation approach with 5000 samples was used to examine the indirect effect of independent variable on dependent variable through proposed mediator for significance.

Results: SCZ (Mean±SD: -.67± 1.93) had significantly deficient CDI than HC (1.36 ± 2.18) (t=3.62; p=0.001). Verum tDCS (32.24 ± 16.48) resulted in greater percentage reduction in AHRS than sham (4.79 ± 8.84) (t=3.64, p=0.004). There was a significant increase in CDI (t=2.48; p=0.03) with verum (0.85 ± 0.88) but not sham (-0.55 ± 0.98) tDCS. Percent change in CDI positively correlated with percent change in AHRS from pre-RCT to post-RCT time-point for the entire sample (N=13; r=0.55, p=0.05). Regression analysis showed that tDCS type (verum/sham) was a significant predictor of percent change in AHRS (β=-27.46, p=0.003) as well as percent change in CDI (β=1.40, p=0.033). Percent change in CDI was a significant predictor of percent change in AHRS (β=8.87, p=0.014). When controlled for percent change in CDI, tDCS type ceased to be a significant predictor of percent change in AHRS (β=-15.0, p=0.063). The predictors accounted for approximately 75% of the variance (R2=0.756, p<0.001). Bootstrap estimation results indicate the coefficient of indirect effect to be significant, β=-12.46, SE=6.92, 95% CI=-31.20, -2.79, and significantly different from zero at p<0.05 (two tailed).

Discussion: Fronto-temporal tDCS reduces severity of auditory verbal hallucination in schizophrenia possibly through correction of the deficient corollary discharge. Fronto-temporal network is crucial to self-tagging component of auditory processing and has conspicuous implications for auditory verbal hallucination pathophysiology.

Trial No. CTRI/2014/12/005307 (Clinical Trials Registry–India)

S56. PHOENIX GROUP, A PROJECT TO PREVENT RELAPSES IN SCHIZOPHRENIA

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