Background: Sexual dysfunction is one of the most frequently occurring side-effects of antipsychotic medication, impacting both quality of life and adherence to treatment. Despite this, limited evidence-based guidance on treatment options is available. The aim of this systematic review was to synthesize and analyze the evidence on the management of antipsychotic-related sexual dysfunction, specifically taking note of the more recently developed antipsychotics that have been incorporated.

Methods: EMBASE, Medline, and PsychINFO databases were searched using search terms related to sexual or erectile dysfunction, treatments, and antipsychotics. 2 reviewers independently assessed papers for the inclusion criteria for randomized controlled trials (RCTs) of treatments for antipsychotic-related sexual dysfunction, including adjunctive medications and a switch of antipsychotic. Studies were excluded if participants did not have recorded sexual dysfunction at baseline.

Results: The primary outcome measure was any change in sexual function. Results 6 RCTs were identified, all of which investigated different interventions; hence, it was not possible to synthesize the data quantitatively. Results were overall limited by small sample size, brief treatment duration, and the potential for bias. 2 studies, one assessing adjunctive sildenafil and the other adjunctive aripiprazole, reported a reduction in antipsychotic-related sexual dysfunction.

Discussion: Due to the lack of high-quality data, no clinical recommendations can be made. Our findings highlight the paucity of high-quality research in this area, and conjecture that it may be difficult to recruit participants with antipsychotic-related sexual dysfunction. Future research may be necessary to unlock and address these difficulties. Furthermore, fully powered future studies should focus on the management of sexual dysfunction rather than the surrogate marker of hyperprolactinemia.

S5. DOES THE TIME OF DRUG ADMINISTRATION ALTER THE ADVERSE EVENT RISK OF LURASIDONE?

Katsuhiko Hagi*1, Nosaka Tadashi1, Andrei Pikalov2
1Sumitomo Dainippon Pharma; 2Sunovion Pharmaceuticals, Inc.

Background: Lurasidone is once a day oral medication, which could be administered any time of the day, but the relationship between the timing of administration and the risk of developing adverse events has not been systematically evaluated.

The purpose of this study was to examine whether there is a difference in the risk of adverse events between lurasidone administration in the morning and at night in the treatment of adult schizophrenia.

Methods: Randomized placebo-controlled trials (RCTs) of lurasidone in adults with acute exacerbation of schizophrenia were analyzed for the incidence of akithisia, somnolence, and nausea.

We compared the risk of each adverse event and the risk differences (RDs) for each lurasidone dose versus placebo in patients taking lurasidone in the morning (AM dosing group) and those taking lurasidone at night (PM dosing group).

Results: Nine RCTs were included in the analysis (six RCTs with AM dosing and three RCTs with PM dosing). In the AM dosing group, lurasidone doses of 20, 40, 80, and 120 mg/day were evaluated, and in the PM dosing group, lurasidone doses of 20, 40, 80, and 160 mg/day were evaluated. The risk of akathisia increased in a dose-dependent manner in AM dosing group.

S51

Poster Session I

S31
S6. SLEEP ENDOPHENOTYPES OF SCHIZOPHRENIA: A HIGH-DENSITY EEG STUDY IN DRUG-NAIVE, FIRST EPISODE PSYCHOSIS PATIENTS

Anna Castelnovoa, Cecilia Casetta2, Francesco Donatib, Renata del Giudicec, Caroline Zangani, Simone Sarassoa, Armando D’Agostinoa3

aFaculty of Biomedical Sciences, Università della Svizzera Italiana, Switzerland; bInstitute of Psychology, Psychiatry and Neurosciences, King’s College London, England; cUniversità degli Studi di Milano, Italy

Background: Slow waves, the hallmark of the deep nonrapid eye movement sleep electroencephalogram (EEG), are critical for restorative sleep and brain plasticity. They arise from the synchronous depolarization and hyperpolarization of millions of cortical neurons and their proper generation and propagation relies upon the integrity of widespread cortico-thalamic networks. Slow wave abnormalities have been reported in patients with Schizophrenia, although with partially contradictory results, probably related to antipsychotic and sedative medications. Recently, their presence and delineation, have been convincingly shown in first-episode psychosis patients (FEP). However, clear evidence of this biomarker at the onset of the disease, prior to any psychopharmacological intervention, remains limited. Moreover, no attempt has been made to elucidate the prognostic meaning of this finding.

Methods: We collected whole night sleep high-density electroencephalography recordings (64-channel BrainAmp, Brain Products GmbH, Gilching, Germany) in 20 drug-naive FEP patients and 20 healthy control subjects (HC). Several clinical psychometric scales as well as neurocognitive tests were administered to all subjects in order to better define psychopathological status and vulnerability. EEG slow wave activity (SWA, spectral power between 1 and 4 Hz) and several slow wave parameters were computed at each electrode location, including density and amplitude, at each electrode location. Along with a group analysis between FEP and HC, a subgroup analysis was also computed between patients who showed a progression of symptoms to full-blown Schizophrenia (SCZ, n = 10) over the next 12-month follow-up and those who did not (OTH, n = 10).

Results: Sleep macro-architecture was globally preserved in FEP patients. SWA (1–4 Hz) was lower in FEP compared to HC but this difference didn’t reach statistical significance. Slow wave density was decreased in FEP compared to HC, with a significance that survived multiple comparison correction over a large fronto-central cluster. Mean amplitude was preserved. At the subgroup analysis, these results were largely driven by the subgroup of patients with a confirmed diagnosis of SCZ at a 12-month follow-up. Indeed, no difference could be found between OTH and HC, while a strong significance was still evident between SCZ and HC.

Discussion: The risk of adverse events in the treatment of schizophrenia with lurasidone can vary depending on the timing of administration. In particular, for akathisia and somnolence, the incidence risks were reduced when lurasidone was administered in PM. Unlike with AM administration, the dose-dependence in the risks of these adverse events were not observed in lurasidone PM administration.

The timing of lurasidone administration could be considered in effort to minimize potential adverse events.

Discussion: The risk of adverse events in the treatment of schizophrenia with lurasidone can vary depending on the timing of administration. In particular, for akathisia and somnolence, the incidence risks were reduced when lurasidone was administered in PM. Unlike with AM administration, the dose-dependence in the risks of these adverse events were not observed in lurasidone PM administration.

The timing of lurasidone administration could be considered in effort to minimize potential adverse events.

S7. INVESTIGATING THE LINK BETWEEN THE PERIPHERAL ENDOCANNOBIOD SYSTEM AND CENTRAL GLUTAMATERGIC NEUROTRANSMISSION IN EARLY PSYCHOSIS: A 7T-MRS STUDY

Amedeo Minichino*,1 Beata Godlewskia, Philip Cowen1, Philip Burnet1, Belinda Lennox1

1University of Oxford

Background: Meta-analytic evidence showed increased levels of peripheral endocannabinoid metabolites in psychotic illness. Alterations in the endocannabinoid system are believed to compromise glutamate and dopamine transmission, which play a central role in pathophysiological models of psychosis. I will present preliminary data from an ongoing high-field proton magnetic resonance spectroscopy (MRS) study aimed at investigating the association between peripheral levels of endocannabinoid system metabolites and central glutamate metabolism in individuals at their first non-affective psychotic episode (NA-FEP) and healthy controls.

Methods: We expect to recruit 17 NA-FEP and 20 healthy controls by January 2020. Currently, we recruited 12 NA-FEP and 18 healthy controls from two different research facilities (Imperial College London and University of Oxford) as part of a cross-sectional study. Participants underwent MRS scanning at 7-T with voxels placed in right dorsolateral prefrontal cortex (right-DLPC), anterior cingulate cortex (ACC), and occipital cortex. Neuro-metabolites will be calculated using the unsuppressed water signal as reference. Endocannabinoid metabolites were quantified from serum samples, collected during the same imaging session.

Results: Analyses are ongoing. Based on previous evidence, expected findings are: (i) reduced glutamate levels in the ACC and right-DLPC of NA-FEP compared to controls; (ii) increased peripheral endocannabinoid metabolites in NA-FEP compared to controls; and (iii) inverse association between peripheral endocannabinoid metabolites and glutamate levels in ACC and right-DLPC in NA-FEP

Discussion: This study will help clarifying the contribution of peripheral endocannabinoid system to central brain mechanisms of key relevance for psychotic illness. It will also add further evidence on the limited literature on high-resolution characterisation of brain metabolites in early psychosis. Strengths of the study include: (i) use of high-field MRS, which allows the estimation of glutamate-related compounds at higher precision than at lower field strength; (ii) reduced heterogeneity of the clinical sample (only male and NA-FEP). Limitations: small sample size and cross-sectional design.

S8. GRIN1 PROMOTER METHYLATION CHANGES IN BLOOD OF EARLY-ONSET PSYCHOTIC PATIENTS AND UNAFFECTED SIBLINGS WITH CHILDHOOD TRAUMA

Camila Loureiro*,1 Corsi-Zueili Fabiana1, Fachim Helene Aparecida1, Shuhama Rosana1, Menezes Paulo Rossi1, Dalton Caroline F2

1 Federal University of Minas Gerais, Brazil; 2 Universidade Federal de São Paulo, Brazil

Background: Increased levels of peripheral endocannabinoid metabolites have been observed in psychotic illness. In psychotic patients, alterations in the endocannabinoid system are believed to compromise glutamate and dopamine transmission. Alterations in these transmitters are critical for normal psychological function. We previously showed decreased glutamate levels in the ACC and right-DLPC in NA-FEP compared to controls, (ii) increased peripheral endocannabinoid metabolites in NA-FEP compared to controls; and (iii) inverse association between peripheral endocannabinoid metabolites and glutamate levels in ACC and right-DLPC in NA-FEP.

Methods: We expect to recruit 17 NA-FEP and 20 healthy controls by January 2020. Currently, we recruited 12 NA-FEP and 18 healthy controls from two different research facilities (Imperial College London and University of Oxford) as part of a cross-sectional study. Participants underwent MRS scanning at 7-T with voxels placed in right dorsolateral prefrontal cortex (right-DLPC), anterior cingulate cortex (ACC), and occipital cortex. Neuro-metabolites will be calculated using the unsuppressed water signal as reference. Endocannabinoid metabolites were quantified from serum samples, collected during the same imaging session.

Results: Analyses are ongoing. Based on previous evidence, expected findings are: (i) reduced glutamate levels in the ACC and right-DLPC of NA-FEP compared to controls; (ii) increased peripheral endocannabinoid metabolites in NA-FEP compared to controls; and (iii) inverse association between peripheral endocannabinoid metabolites and glutamate levels in ACC and right-DLPC in NA-FEP.

Discussion: This study will help clarifying the contribution of peripheral endocannabinoid system to central brain mechanisms of key relevance for psychotic illness. It will also add further evidence on the limited literature on high-resolution characterisation of brain metabolites in early psychosis. Strengths of the study include: (i) use of high-field MRS, which allows the estimation of glutamate-related compounds at higher precision than at lower field strength; (ii) reduced heterogeneity of the clinical sample (only male and NA-FEP). Limitations: small sample size and cross-sectional design.