

EPP0363

Alteration of cortical functional networks in mood disorders with resting-state electroencephalography

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Introduction: This study investigated source-level cortical functional networks using resting-state electroencephalography (EEG) in patients with Bipolar disorder and Major depressive disorder, comparing the neuropathology of these disorders.

Objectives: This study investigated source-level cortical functional networks using resting-state electroencephalography (EEG) in patients with Bipolar disorder and Major depressive disorder, comparing the neuropathology of these disorders.

Methods: A total of 116 participants (35 patients diagnosed with bipolar disorder(BD), 39 patients diagnosed with Major depressive disorder(MDD), and 42 people who are healthy-control groups(HC)) were enrolled for this study. Depression and anxiety were evaluated with using State-Trait Anxiety Inventory (STAI) and Beck Depression Inventory (BDI). Graph theory-based source-level weighted functional networks were assessed via strength, clustering coefficient (CC), and path length (PL) in six frequency bands.

Results: At the global level, patients with BD and MDD showed higher strength ($p = 0.001$) and CC ($p = 0.001$), and lower PL ($p < 0.001$) in the high beta band, compared to HCs. At the nodal level, compared to HCs, patients with BD showed higher high beta band nodal CCs in the right precuneus($p < 0.001$), left isthmus cingulate($p < 0.001$), bilateral paracentral($p < 0.001$), and left superior frontal($p < 0.001$); however, patients with MDD showed higher nodal CC only in the right precuneus($p < 0.001$) compared to HCs. Although both MDD and BD patients had similar global level network changes, they had different nodal level network changes compared to HCs.

Conclusions: This study suggest that both patients have similar network changes at the global level, but they have different network changes at the nodal level. Also, the higher nodal CCs in the high beta band might indicate the regions became more connected with their neighbors in accordance with the severity of depressive and anxious states. This study found a significant correlation between cortical network state and anxiety-related psychological measure in BD patients. Our source-level cortical network indices might contribute to the understanding of the neuropathological mechanisms in these two disorders.

Disclosure of Interest: None Declared

EPP0364

Interplay of Environmental Factors, Genetic Susceptibility, and Sleep Disturbances predict Bipolar Disorder's Relapses: preliminary results from a pilot study

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Introduction: Predicting acute affective episodes in individuals with Bipolar Disorder (BD) remains a clinical challenge. Specific environmental stressors, including air pollution, noise, and temperature variations might worsen affective symptoms or sleep in the general population, but their role in BD relapses is often overlooked. Indeed, they might exacerbate BD by perturbing circadian rhythms – fundamental aspects of BD.

Objectives: We thereby present the protocol of this pilot study and future preliminary data. We aim to longitudinally assess sleep alterations, mood fluctuations, and environmental exposure to several factors (air pollutants, climate, noise, artificial light-at-night, green space access) in patients with BD and to check the association of these variables with BD relapses.

Methods: In this pilot study, we will recruit 40 patients with BD in a 6-month prospective study. Patients were assessed during baseline, at 3 and 6 months. Data recollected will consist of a subjective (questionnaires) and objective (through meteorological stations) evaluation of physical environmental factors around the home residence; clinical assessment of mood and circadian rhythms, and continuous tracking of sleep-wake patterns, energy, and movement using actigraphy.

Results: Expected results will show that exposure to a worse environment (higher pollution, noise, light exposure, climate) will be associated with worse BD outcomes (i.e., relapse, mood symptoms, sleep alterations).

Conclusions: We will be sharing preliminary data from our ongoing study, offering insights into early patterns and findings that shed light on our objectives.

Disclosure of Interest: None Declared

EPP0365

Korean Medication Algorithm for Bipolar Disorder: changes in preferred medications for mania over 20 years

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Introduction: Majority of international guidelines for bipolar disorders are based on evidences from clinical trials. In contrast, the Korean Medication Algorithm Project for Bipolar Disorder (KMAP-BP) was developed to adopt an expert-consensus paradigm which was more practical and specific to the atmosphere in Korea.