Conclusions: In conclusion, our models differentiated between BD and MDD patients at the single-subject level with good accuracy using structural MRI data. Notably, the models based on white matter integrity measures relying on true information, rather than chance.

Disclosure of Interest: None Declared

EPP1006

Different patterns of frontal and temporoparietal activities related to distinct inhibitory functions in adhd

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Introduction: Inhibition is a core component of executive functions but is not a unitary construct. Instead, different inhibitory processes have specific behavioral effects and neural bases. Three important inhibitory functions explored by the literature are 1) interference control (i.e., inhibition of distractive information); 2) inhibition of prepotent responses and 3) inhibition of ongoing responses. These functions were described in the self-regulation theory as the possible main impairment in attention-deficit hyperactivity disorder (ADHD) and since then they have shown an association with several psychiatric disorders.
Objectives: The current study investigated the neural bases of interference control, inhibition of prepotent responses, and inhibition of ongoing responses as they were assessed by a Stroop-matching/stop-signal task developed by our group.
Methods: The Stroop-matching/stop-signal employs different conditions to create the demands for each inhibition which allows the assessment of these functions using a single protocol. Brain activations were acquired using fNRIS in a block-design method. The concentration of oxygenated hemoglobin (HbO). The first level analysis of HbO signals used a general linear model (GLM) to estimate individual brain activations. The second level analysis was performed using a linear mixed model to generate brain activations at the group level. Alpha level = 0.05 and the false discovery rate was applied when necessary. The sample was composed of 25 young adults (mean age = 21.8, SD = 4.39).
Results: task Interference control showed activation in the left and right temporoparietal junction (TPJ), the right dorsolateral prefrontal cortex (DPLFC), and inferior frontal gyrus (IFG); inhibition of prepotent responses showed increased activity in the right IFG and left DLPFC; the suppression of ongoing responses showed a deactivation of the IFG and DLPFC bilaterally.
Conclusions: These results indicate that the three inhibitory functions assessed present distinct brain patterns of function. The lateralization role was evident in DLPFC and IFG activities and recruitment of parietal areas seems to be limited to interference control in this protocol. Also, the stop-signal demand led to the deactivation of areas associated with the resolution of the primary Stroop-matching task. This study elucidates the role of brain mechanisms associated with specific inhibitory processes that are impaired in psychiatric disorders such as ADHD.
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EPP1007

Alteration of plasma phospholipids distinguish schizophrenic patients from controls: A targeted metabolomics study

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Introduction: Schizophrenia (SCZ) is one of the most severe mental disorders. Several elements involved in pathogenesis have been characterized recently. However, tools for diagnosis and risk prediction are limited. Elucidation of the underlying genomic and molecular mechanisms of SCA remains a challenge.
Objectives: In this study, we aimed to identify plasma biomarkers for SCZ using targeted metabolomics.
Methods: All enrolled patients were drug-free for at least 3 months prior to admission. Plasma from 31 SCZ patients and 70 matched controls were analyzed using the LC/MS- Api 4000 QTrap Sciex. A total of 188 targeted metabolites, including 21 amino acids, 21 biogenic amines and 145 lipids or lipid-related metabolites were analyzed. All data modeling and analysis is done using MetaboAnalyst 5.0
Results: There was no significant difference in the studied groups regarding BMI. Plasma Triglycerides, LDL-C, total proteins levels were significantly decreased in SCZ compared to controls. Heatmap identified 2 clusters with 25 significantly differentially expressed metabolites (FDR <0.05) between the drug-naïve group and the matched controls. The OPLS-DA score plot showed that the groups are clearly separated according to plasma phospholipids concentrations. Among these differential metabolites, the expression level of very long chain Phosphatidylcholines (PC 36 – PC p42) and acylcarnitines were significantly decreased in SCZ compared to controls, whereas sphingomyelin (SM) and lysoPC were significantly lower in drug-naive patients.
Conclusions: In this study, we found that plasma phospholipids were significantly dysregulated in the SCZ patients and could be a promising pathway to explore SCZ.

Disclosure of Interest: None Declared