Methods: Genome-wide data (HumanOmni1-Quad) was used to impute 7 HLA genes in 504 SA cases and 3041 controls of African American females. HLA imputation was performed using HIBAG and multi-ethnic parameter estimates. HLA alleles with posterior probabilities <0.5 were excluded. Association with SA was evaluated using logistic regression. Association with CP rating was evaluated using linear regression in 834 subjects, controlling for age and ancestry (first two principal components). Bonferroni correction was used to adjust for multiple testing. Moderating effect of HLA alleles on the link between SA and CP was analyzed.
Results: SA is associated with CP in women (p=5e-8). HLA-DQA1*02:01 was more frequent in both SA cases (p=0.039) and individuals with chronic pain (p=0.046), but lost its significance after Bonferroni correction. Also, the association between SA and CP was not moderated by HLA-DQA1*02:01 (p>0.05). HLA-DQA1*02:01 have also been associated with other psychiatric disorders.
Conclusions: These results showed that HLA-DQA1*02:01 alleles are associated with SA and CP independently, and do not moderate the association between SA and CP.
Keywords: Suicide Attempts, Chronic Pain, HLA

F96. MicroRNA Dysregulation in Bipolar Manic and Euthymic Patients

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Background: Bipolar disorder (BPD) is a major psychiatric disorder with an unclear pathophysiology. Peripheral blood samples are easily drawn, making them are good candidates for diagnosing diseases. MicroRNAs are small non-coding RNA transcripts that regulate gene expression by binding to the 3'- UTR of mRNAs and directing their degradation. The aim of this study was to use blood plasma to investigate microRNA dysregulations in bipolar manic and euthymic patients.
Methods: Blood samples were collected from 58 patients with bipolar I disorder (19 manic, 39 euthymic) and 51 healthy controls. Total RNA was extracted from peripheral whole blood using Tri-Reagent (Sigma)
Results: Four microRNAs (miR-29a-3p, p=0.035; miR-106b-5p, p=0.014; miR-107, p=0.011; and miR-125a-3p, p=0.014) were upregulated in the entire bipolar group, compared to the healthy controls. Seven microRNAs (miR-9-5p, p=0.032; miR-29a-3p, p=0.001; miR-106a-5p, p=0.034; miR-106b-5p, p=0.003; miR-107, p<0.001; miR-125a-3p, p=0.016; and miR-125b-5p, p=0.004) were more upregulated in bipolar manic patients compared to the healthy controls, and two microRNAs (miR-106a-5p, p=0.013, and miR-107, p=0.021) showed statistically significant upregulation in the manic patients compared to the euthymic patients.
Conclusions: Our results showed greater miRNA dysregulation in the manic patients than in the euthymic patients. Two microRNAs could be more selective for bipolar manic episodes. Future studies should include depressive patients along with euthymic and manic patients
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Keywords: Bipolar Disorder, miRNAs, Mania, Euthymia

F97. Bipolar Depression: A Neuropsychological and MRI Brain Myo-Inositol Spectroscopy Controlled Study

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Background: Several published studies with proton magnetic resonance spectroscopy (1H-MRS) had shown myo-inositol (MI) concentrations changes in Bipolar Disorder (BD). Also, BD patients present cognitive impairment documented in specific areas such as attention, learning and memory and executive functioning. These impairments are present during the acute phases of illness and tend to persist into periods of relative wellness.
Methods: We studied 8 BD patients and 8 normal controls. The MI concentration by 1H-MRS in the medial and lateral prefrontal areas, fronto-orbital areas, insula, basal ganglia, thalamus and temporal and occipital cortex were measure. Also, a cognitive battery was administered and differences between the groups were analyzed. BD patients met criteria for a current depressed episode and were under treatment with lithium carbonate.
Results: No statistically significant differences were observed with 1H-MRS for MI concentration between PD patients and controls in any of brain areas studied. The group of depressive bipolar patients presented a significant difference in Executive Functions performance compared to healthy controls, primarily impairments in processing speed, inhibitory control, attention and cognitive flexibility.
Conclusions: Our finding with no differences between normal controls and depressive BD patients on lithium treatment on MI brain concentration are in agreement with previous published studies. The differences in performance in order execution and phonological fluency could be related to impulsivity, and differences in verbal memory associated with the executive component of free recall. Supporting the notion that specific cognitive functions are impaired during the depressive episode in subjects suffering from BD, even if they are under lithium treatment.
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Keywords: Myoinositol, MR Spectroscopy, Bipolar Disorder, Neurocognitive Tests