P-1255 - SEARCHING OF ENDOPHENOTYPES IN SCHIZOPHRENIA: RESULTS FROM H1-MAGNETIC RESONANCE SPECTROSCOPY STUDY

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Introduction: Endophenotypes represent intermediate phenotypes on the putative causal pathway from the genotype to the phenotype. Endophenotype abnormalities in domains such as neurophysiology or neurocognition occur in schizophrenia patients as well as their clinically "unaffected" relatives, and reflect polymorphisms in the DNA of schizophrenia spectrum subjects which create vulnerability to developing schizophrenia.
Aims: The aim of our study was searching endophenotype traits in schizophrenia among H1MRS results according to Gur at al (2007) following criteria: I. Association with illness—moderate to large effect sizes between schizophrenia patients and controls II. State independent III. Heritability IV. Found in unaffected relatives at a higher rate than in the general population.
Methods: We examined the H1 MRS-NAA, Cho, mI, GLX, Cr metabolite ratios in 9 brain structures: Nucleus caudatus(NC), Nucleus lentiformis(NL), Nucleus lateralis thalami(NLT), Prefrontal cortex(PC), Anterior cingulate gyrus(ACG), Centrum semiovale(CS), Posterior cingulate gyrus(PCG), Hippocampus(H), Cerebellum(CE) of 36 patients with schizophrenia, 33 unaffected siblings, 18 control group.
Results: With the reference to the analyzed 408 neurometabolical variables, criterion I was fulfilled by 25 variables from the following structures: 2NC, 1NL, 5PC, 4CS, 7H, 4NLT, 2CE; criterion IV-145 variables: 24NC, 16NL, 19PC, 13CS, 7H, 13NLT, 22C, 20ACG, 11PCG; criterion II - 15 variables: 4PC, 4CS, 4H, 2NLT, 2C, criterion III - 1NC, 1H, 1NLT.
Conclusion: All four criteria were fulfilled by 2 variables: **Glx1/Cr** proportions in the left part of Hippocampus, and **mI/Cr** proportions in the right Nucleus lateralis thalami, which can be considered as potential endophenotypical markers in schizophrenia.
Grant KBN 3PO5B03024

https://doi.org/10.1016/S0924-9338(12)75422-6 Published online by Cambridge University Press