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CORRELATIONS BETWEEN NUCLEUS LENTIFORMIS ASYMMETRY PARAMETERS (MRI DATA) AND MEMORY CHARACTERISTICS (SEMANTIC ASPECT) IN PATIENTS WITH SCHIZOPHRENIA

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Introduction: It`s evident that abnormalities of subcortical brain structures asymmetry are related with schizophrenia pathogenesis.

Objectives: Basal ganglia participate in memory processes. Estimation of relationship between their asymmetry parameters and memory characteristics should be examined.

Aims: To investigate correlations between nucleus lentiformis (NL) MRI parameters and memory peculiarities (semantic aspect) in schizophrenia 96 patients and 51 controls were examined.

Methods: 3D MR images were acquired on magnet 0.5 Tomikon S50, Bruker (69 patients` and 34 controls` groups) and 1.5T GE Signa System (27 patients` and 17 controls` groups). Volumes (V) of left and right NL and their asymmetry coefficients (2 x (right NLV- left NLV) x 100/ (right NLV + left NLV),%) were calculated.

Psychological pictogram method[1,2] estimating mnestic activity including semantic aspect was used. Quantitative (retention productivity score (RPS) was analyzed.

Results: Decreasing of the right (more prominent, p=0.046, p=0.044) and left NL (p=0.048, p=0.048) volumes were demonstrated in both patients groups. The RPS was less in both patients groups as compared with controls (p< 0.01). Correlation between NL asymmetry coefficients and RPS was revealed in patients underwent 0.5 and 1.5T scanners (r= -0.51, p< 0.05; r= - 0.57, p< 0.05 correspondingly).

Conclusions: The data confirm significance of brain asymmetry and memory dysfunction in etiology of schizophrenia.

References:

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