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THE FIRST EXPERIENCE OF ACOUSTIC STARTLE RESPONSE PREPULSE MODIFICATION MEASUREMENT IN RUSSIAN PATIENTS WITH SCHIZOPHRENIA AND HEALTHY CONTROLS

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Objectives: Estimation of acoustic startle response (ASR) and its prepulse modification in Russian population of patients with schizophrenia and healthy controls.

Methods: All subjects were males 25-50 years old. ASR was measured bilaterally by orbicularis oculi electromyographic response to 50 ms 110 dB white band noise. Prepulse at lead intervals of 60, 120 and 2500 ms were delivered according to protocol, recommended by Consortium on the genetics of schizophrenia.

Results: ASR magnitude to pulse alone trials in initial block and habituation didn't differ significantly between patients and controls. Patients compared to controls displayed reduced magnitude prepulse inhibition that was significant at 60 ms lead interval and reduction was more pronounced at the left eye. Startle latency prepulse facilitation at 60 ms lead interval was observed in patients but not in controls whereas prepulse inhibition of startle latency at 120 ms lead interval was seen in controls but not in patients. ASR amplitude prepulse facilitation (PPF) at 2500 ms lead interval was impaired in patients and this deficit was observed only in drug-naïve subjects. Effects of head trauma and experience of psychoactive drugs intake on ASR prepulse modification were revealed only in controls. High initial amplitude and short ASR latency in patients correlated with excitation level (PANSS scale P4). At the same time, PPF reduction correlated with scales P2, P4, P5, P7 and sum of positive PANSS scales.

Conclusions: Results of present study testify the possibility of ASR prepulse modification use for schizophrenia endophenotyping in Russia.

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