ABSTRACT

Possible connection between latent toxoplasmosis and schizophrenia is a very interesting and medically important topic. In this thesis I tried to map current state of knowledge in the interdisciplinary research of schizophrenia and *Toxoplasma gondii* and their possible connections as well as to show differences in responses between *Toxoplasma*-positive and *Toxoplasma*-negative subjects using simple computer-administered tests of prepulse inhibition of startle reaction (PPI). Such differences would suggest another similarity between schizophrenia patients and subjects with latent toxoplasmosis as the sensorimotor gating responsible for PPI was found to be disrupted in schizophrenia patients. Side goal of the study was to test newly developed PC software for testing PPI and to determine its applicability in further research.

Subjects for the tests were recruited among adepts of professional military service; 409 subjects completed the test of acoustic PPI and 276 subjects completed the test of visual PPI. All the subjects were tested on presence of specific anti-*Toxoplasma* IgG in their blood serum.

Both tests revealed significant ($p<0.001$) differences between responses on prepulse-preceded stimuli and plain stimuli without prepulse, no significant results were, however, gained for the effects of latent toxoplasmosis neither in response times nor in reactions on prepulse-preceded stimuli. One of the possible explanations is the effect of positive RhD factor in vast majority of experimental subjects; inadequate number of RhD negative subjects with latent toxoplasmosis disallowed further analysis of differences between reactions of RhD positive and RhD negative subjects with latent toxoplasmosis.