Interrelations of the CNS and immune system in pathogenesis and treatment of attack-like schizophrenia

Contemporary views on the role of neuroinflammation and neuroplasticity processes in pathogenesis of schizophrenia, as well as significant medical-social problem of optimization of its treatment, determine the necessity of multidisciplinary approaches for investigation of brain mechanisms of this severe illness. The aim of the present study is to assess the interrelations of the CNS and immune system in patients with attack-like schizophrenia and to reveal the set of neurobiological parameters informative for individual prediction of therapeutic response. Correlation and regression analyses of quantitative clinical scores (by PANSS scale), resting EEG spectral parameters and some immunological parameters have been performed in patients with manic-delusional and hallucinatory-delusional conditions in the frames of attack-like schizophrenia. Neurobiological data obtained before the beginning of syndrome based treatment course (during visit 1) were matched with clinical scores of the same patients at the stage of remission establishment after treatment course (during visit 2). The multiple linear regression equations were created which contained only 3 to 4 (from 80) initial EEG parameters and one of four immunological parameters allowed to predict from 66 to 87 per cent of clinical scores variance after treatment course (during visit 2). The data obtained emphasize the role of neurophysiological inhibition deficit and of processes of neuroinflammation and neuroplasticity in pathogenesis of manic-delusional and hallucinatory-delusional conditions, and may be used practically for objective assessment of severity of patient's initial clinical state, as well for elaboration of methods of individual prediction of syndrome based treatment efficacy in patients with attack-like schizophrenia.

Biography
IZNAK Andrey has completed his PhD in Physiology from M V Lomonosov Moscow State University and his DSc in Physiology from the same university. He is a Neurophysiologist, Professor of Physiology and Head of Laboratory of Neurophysiology at Mental Health Research Center (Moscow, Russia). He has published more than 60 papers on sensory and clinical neurophysiology in reputed journals and served as an Editorial Board Member of several reputed journals.

iznak@inbox.ru