

EVIDENCE OF NEUROPHYSIOLOGICAL DISTINCTION BETWEEN SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER

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Background: To date, studies investigating the neurobiological basis of distinction between schizophrenia and schizoaffective disorder are rare, although patients with schizophrenia and schizoaffective disorder demonstrate different clinical and functional outcomes.

Methods: We analysed the EEG parameters (spectral power and coherence) in resting state and while performance of the arithmetical task (subsequent subtraction from 200-7) in 32 patients with first episode of schizophrenia (SCH, n = 32), 32 patients with first episode of schizoaffective disorder (SAD, n = 32) and healthy controls (HC, n = 40).

Results: In resting state in SCH spectral power (SP) of theta and gamma band was higher, and lower in alpha band comparing to HC. In SAD SP was higher only in beta2 band in contrast to HC. Coherence in resting state in SAD was higher comparing to HC as well as SCH in prefrontal areas in theta band and in the posterior regions in fast frequency bands (gamma1 and gamma2). Comparison of task performance with resting state in HC showed increase of SP in theta and gamma bands in anterior midline sites with synchronous increase of coherence in prefrontal areas. In SCH reduced SP of theta, alpha and beta bands and decreased coherence in all bands was obtained. In SAD we observed elevation of SP in gamma band as well as increase of coherence in all frequency bands except theta band.

Conclusions: Our findings indicate the neurophysiological distinction between schizophrenia and schizoaffective disorders and provide the basement for further research.