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BRAIN MAPPING CRITERIA IN DIAGNOSTIC OF BRAIN STATE IN EPILEPSY

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Digital EEG criteria which help to differ EEG of patients with organic brain damage and healthy ones invented by Misiuk N. and coauthors (2003). They are: alpha-rhythm mean and peak frequency ≥ 9.15 Hz both, slow-wave activity index $< 29\%$, beta- and alpha-activity correct spatial organization. Scientifically proved that appearance of anyone abovementioned characteristic means actuality of brain damage. Their reduction is a sign of brain state rehabilitation.

The aim of the investigation was to study the chance to use abovementioned diagnostic system as criteria of remission/acute condition of epilepsy.

Objectives: 182 patients with epilepsy aged 18-55 years observed recurrently for 5-9 years.

Etiologically epilepsy was symptomatic (n=108), idiopathic (n=26) and cryptogenic (n=48).

Remission for ≥ 2 year period was set in 67% cases.

Methods: Digital EEG performed on 19 channels and analyzed in spectral and period metric regimen.

Results: Brain mapping (digital EEG) revealed organic brain damage patterns (1-4 Digital EEG signs) in 81.9% of cases: 86.1% for symptomatic, 69.2% for idiopathic, 79.2% for cryptogenic epilepsy among patients with acute phase of disease. When remission achieved EEG patterns exposition decreased dramatically - from 81.9% to 9.8%.

Conclusion: The data obtained fits the hypothesis that activity of epilepsy defined by mean of Digital EEG. These characteristics of the brain' functional state are very sensible and neurologists have possibility to take into account this information while prescribing or depriving anticonvulsants.