

Autistic-like disorders in children with resistant forms of epilepsy caused by “forced EEG normalization” (Landolt’s syndrome)

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Background: "Forced EEG normalization" (Landolt's syndrome) is a special type of behavioral disorder in the malignant forms of epilepsy in children. Autistic-like disorders caused by this phenomenon develop during decrease or regression of epileptic seizures with normal EEG. The presence of antagonism to folic acid in a number of AEDs increases the dopaminergic activity and aggravates these manifestations. Aim: To describe early EEG and behavioral disorders in children with "forced EEG normalization" syndrome. Methods: 18 children aged from 6 to 12 years with resistant symptomatic epilepsy were enrolled in the study. Main causes of epilepsy were focal cortical dysplasia (5 children), agenesis of corpus callosum (2 children), sclerosis of the hippocampus (3 children), hypoxic-ischemic foci (8 children). Necessary clinical tests including AED serum concentration were carried out. Results: 13 patients on AED therapy had marked psychomotor and autistic-like disorders with attention deficit and disinhibition (during 2-4 weeks), in absence of epileptic seizures and with normal EEG. Previously received AEDs were not canceled, but enterosorbent, phenibut and bromides were assigned. Folic acid was prescribed, as an antagonist of dopaminergic activity. During a "forced EEG normalization" episode, an increase in low-amplitude (up to 20 microvolts) high-frequency beta-rhythm and the predominance of theta and delta waves were noted on the EEG. The behavioral disorders were normalized in the interval from 7 days to 2 months. Conclusions: In the resistant forms of childhood epilepsy, temporary behavioral disorders may occur during the AED therapy and EEG normalization. This may require mild tranquilization and folate therapy.