

The relevance of attention deficit hyperactivity disorder in self-limited childhood epilepsy with centrotemporal spikes.

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Abstract

In this study, we aimed to evaluate the attentional and executive functions in patients with benign childhood epilepsy with centrotemporal spikes (BCECTS) with and without attention-deficit hyperactivity disorder (ADHD) compared with controls and compared with patients with ADHD without epilepsy. We evaluated 12 patients with BCECTS and ADHD (66.7% boys; mean age of 9.67years); 11 children with non-ADHD BCECTS (63.6% boys; mean age of 11.91years); 20 healthy children (75% boys; mean age of 10.15years); and 20 subjects with ADHD without epilepsy (60% boys; mean age of 10.9years). We used a comprehensive battery of neuropsychological tests to evaluate attentional and executive functions in their broad domains. Patients with BCECTS and ADHD had worse performance in Conners' Continuous Performance Test II (reaction time standard error [$p=0.008$], variability [$p=0.033$], perseverations [$p=0.044$] and in reaction time interstimuli interval [$p=0.016$]). Patients with ADHD showed worse performance in Trail Making Test B errors [$p=0.012$]. In conclusion, patients with BCECTS and ADHD had worse executive and attentional performance compared with controls than non-ADHD patients with BCECTS. Regardless of the presence of epilepsy, ADHD also negatively impacted executive and attentional functions but in different executive subdomains compared with patients with epilepsy.