Biomarkers of brain function in children with uncomplicated epilepsy

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Abstract:

Many studies reported cognitive and behavioral abnormalities with recurrent seizures in adult brains. Similar evidences from the pediatric population are few and controversial. We aimed to investigate the effect of recurrent seizures on the developing brains. Included were 42 children with recurrent untreated uncomplicated epilepsy (generalized or focal) with mean age of 14.1 years and 30 healthy children for comparison. Intelligence (IQ) and cognition were examined using Wechsler Intelligence Scale for Children (WISC-III) and Stanford Binet subsets test (SBST4). Serum levels of neuron-specific enolase (NSE) and S100B proteins, sensitive markers of neuronal and glial cells damage were measured. Compared to controls, patients had lower mean score of full scale IQ (FSIQ) of WISC-III (P=0.045) particularly performance IQ (PIQ) scores (P.