Seizures and intellectual outcome: Clinico-radiological study of 30 Egyptian cases of tuberous sclerosis complex

Hatem Samir a,*, Hadeer Abdel Ghaffar b, Mohamed Nasr c

a Department of Neurology, Cairo University, Cairo, Egypt
b Department of Pediatric, Fayoum University, Egypt
c Department of Psychiatry, Cairo University, Egypt

Received 10 May 2010
Received in revised form
29 June 2010
Accepted 27 July 2010

Abstract
Background and objectives: Tuberous sclerosis complex (TSC) is a multisystemic disorder that involves primarily CNS, skin, kidney and heart. The aim of this study is to determine whether seizures type, interictal EEGs and tubers burden in MRI are correlated to seizure and intellectual outcome, and to identify the clinical risk factors for mental retardation and developing autism in these patients.

Methods: This was a prospective study that was conducted on 30 Egyptian children with tuberous sclerosis complex (TSC), diagnosed according to the criteria of National Institutes of Health consensus conference revised the diagnostic criteria for TSC. All patients underwent clinical and psychometric evaluation, interictal EEG, and MRI brain.

Results and conclusions: We found that poor intellectual outcome is related to early onset of seizures, infantile spasms, severely epileptogenic EEG findings and tuber burden on the Left side. Autistic behavior is related to seizure type (more with infantile spasms), severely epileptogenic EEG findings, frontal location of tubers and higher number of tubers (>8).

Keywords: Tuberous sclerosis complex - Intellectual outcome-Seizures-Tubers

European journal of pediatric neurology 15 (2011) 131-137