

LETTER TO EDITOR (VIEWERS CHOICE)

A STUDY TO DETERMINE THE CLINICAL PREDICTORS OF FAVORABLE OUTCOME IN CHILDHOOD SEIZURES

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Seizure is a clinical manifestation of neurological dysfunction in children. Despite advancement of medical science, pediatricians managing seizures are challenged by difficult prognostic questions. The reliable early predictors of outcome are underlying etiology of the seizures, early seizure frequency (1), neurodevelopmental status before onset of seizures (2) and specific electroencephalography (EEG) background patterns.

Many studies have sought to define predictors of long-term outcome in children developing seizures, but there are only few studies that tried to determine the clinical predictors of favorable outcome in childhood seizures. So an observational-analytical study was done to determine the clinical factors that predicts favorable outcome in seizures of children. We followed up 74 seizure cases admitted to pediatric ward of Armed Forces Medical College, Command Hospital (SC), Pune and Southern Railway Headquarters Hospital Chennai during the study period of August 2009 to August 2011. All children between 1 month and 12 years of age, diagnosed of seizure disorder, irrespective of type of seizures, on anti-convulsant medication (monotherapy) with reliable follow up records and new cases of seizure disorder started on monotherapy, that can be followed up for a minimum period of 6 months were included in the study. The drug used and its dosage was not taken into consideration in this study. Cases of febrile seizures on prophylaxis, cases on polytherapy and cases lost to follow up were excluded from the study. A seizure disorder child, on monotherapy, with only a single initial episode of seizure, with no recurrence during the follow up period of 6 months was defined to have a favorable outcome.

Of the 86 cases, only 74 cases satisfied the inclusion criteria which comprised of 57 males and 14 females. Forty two cases were having favorable outcome. Outcome was favorable in 60% (30/60) of cases with generalized tonic clonic type of initial seizures, 58.6% (34/58) cases with initial duration of seizures less than five minutes and 82.4% (14/17) of cases with age of onset of seizures between 3 years & 6 years. Drug compliance was good in 95.2% (40/42) cases with favorable outcome. Outcome was unfavorable in 66% cases of myoclonic seizures, 80% cases with initial seizure duration more than 30 minutes, 55.9% of cases with age of onset below one year of age, 47.6% of cases with tone abnormalities, 57.14% cases with abnormal head circumference and 60% cases with developmental delay in one or more domains.

The presence of development delay in one or more domains was found statistically significant predictor of unfavorable outcome (p value - 0.016). This study is having a few limitations as sample size is small, drug and dosage of anti-epileptic medication differs with each patient which was not taken into account and follow up period is short. The findings of this study need to be verified in a larger prospective study. This study was designed to aid pediatricians working in rural setups without any sophisticated or advanced facilities, to predict and prognosticate outcome of seizure cases based on clinical findings.

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