



Risk factors for drug-resistant epilepsy among pediatric patients in Philippine Children's Medical Center



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Background

In the Philippines, epilepsy estimates 0.9% prevalence rate in which 25% is estimated to be drug-resistant to therapy. Early identification of factors for drug-resistant epilepsy (DRE) is crucial for prognosis and treatment.

Objectives

To investigate risk factors and clinical profile for DRE

Methods

This is a retrospective case-control study comprising of 183 children, divided into 92 cases and 91 controls.

Results

Slightly more than half (56%) of these were males, and the median age among them was 8 (IQR 4-12) years. Nearly half (47%) experienced their first episode of seizure before the age of one. Majority were diagnosed with developmental delay (92%) and had abnormal neurologic examination (74%). There was a greater prevalence of microcephaly among cases (66% vs 52%, $p=.044$). The most common types of epilepsy were focal (59%) and focal with generalized (33%) seizure. Among patient factors, microcephaly ($cOR=1.84$, $95\%CI=1.01-3.34$, $p=.045$), presence of both focal and generalized seizures ($cOR=2.80$, $95\%CI=1.44-5.44$, $p=.002$), and number of anti-seizure medications (ASMs) ($cOR=2.01$, $95\%CI=1.29-3.13$, $p=.002$) were each crudely associated with greater odds of intractability. Developmental delay ($aOR=4.20$, $95\%CI=1.12-15.78$) and number of ASMs ($aOR=2.21$, $95\%CI=1.42-3.43$) were both associated with significantly greater odds of DRE.

Conclusions

Our study found that microcephaly, presence of both focal and generalized seizures, and number of ASMs were each crudely associated with greater odds of intractable epilepsy. Moreover, our research points out that having developmental delay and number of ASMs are associated with significantly greater odds of drug resistance epilepsy.

Key words. Epilepsy, Pediatric, Drug-resistant