Risk Factors and Predictors of Refractory Childhood Epilepsy: Case Control Study

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Abstract:

Background: Each year, 3.5 million new cases of epilepsy are reported. Unfortunately, 6-14% of these children will develop refractory epilepsy. Aim: Is to determine the risk factors and predictors of refractory epilepsy. Patients and Methods: Case control study was conducted at Assiut university children hospital. Cases were children aged 2-18 years who were diagnosed as refractory epilepsy whereas controls were matched to cases regarding age, sex, and they were diagnosed as responsive epilepsy. Results: History of birth hypoxia, neonatal cyanosis, neonatal convulsions and NICU admission were significantly higher among patients with refractory epilepsy than those with responsive epilepsy. Past history of CNS infections, intracranial hemorrhage and febrile convulsions were significantly higher among patients with refractory epilepsy than those with responsive epilepsy. Physical and mental developmental delay occurred among (80.6% & 78.5%) of children with refractory epilepsy versus (19.4% & 18.3%) of children with responsive epilepsy with statistical significant difference. Age of seizure onset less than one year was reported among 75.3% of refractory epilepsy group versus 43% of those with responsive epilepsy. Multiple seizures type was reported among 36.5% of children with refractory epilepsy versus 6.5% of the responsive group. Moreover, about 90% of children with refractory epilepsy reported daily seizures at the disease onset. History of status epilepticus and presence of epileptic syndromes reported among 43% & 26.9% respectively of children with refractory epilepsy, with statistical significant difference. Microcephaly, motor deficit were statistically higher among patients with refractory epilepsy than those with responsive epilepsy. Conclusion: The most important independent predictors of refractoriness were: High initial seizures frequency, motor deficit, birth hypoxia, delayed mental development and febrile convulsions. Recommendations: Good training of health care providers for the proper management of labor to avoid perinatal hypoxia, professional follow-up of children for early signs of development mental delay and health education and training to the caregiver and health care provider about proper management of fever to avoid febrile convulsions.

Keywords:

Key Words: Refractory epilepsy ▪ Childhood epilepsy ▪ Risk factors ▪ Predictors.

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