

RISK FACTORS OF CHILDHOOD EPILEPSY

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Abstract

Risk factors of childhood epilepsy in Kerala

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Introduction: Nearly 5 million people in India have epilepsy. There is little authentic data from India on the risk factors for epilepsy in children would be the first step in the direction of prevention of epilepsy.

Objective: To identify the risk factors for epilepsy in children.

Method: Case control study in the neurology-clinic of SAT hospital, Medical College. All children (1-12 years) with epilepsy satisfying the selection criteria were included, after obtaining parental consent. Those with single seizures or febrile seizures were excluded. Controls were children without epilepsy attending the same hospital. Parents were the source of information. Their clinical data were obtained from medical records. Statistical analysis included chi-square test, odds ratio and logistic regression.

Results: There were 82 cases and 160 controls whose mean age were 6.86 (95% CI 5.2-8.4) and 5.17 (95% CI 4.67-5.67) years respectively. On univariate analysis, family history of epilepsy, prolonged labor, cyanosis at birth, delayed cry after birth, admission to newborn nursery, congenital malformations, neurocutaneous markers, incessant cry in the first week, delayed developmental milestones, meningitis, encephalitis and head trauma were found to be significant. History of parental consanguinity, maternal age, antenatal infections, pregnancy induced hypertension, gestational diabetes, maturity at birth and birth weight were not found to be significant. On logistic regression, family history of epilepsy (OR 4.7), history suggestive of perinatal hypoxia (OR 8.6), delayed developmental milestones (OR 12.6) and head trauma (OR 5.8) were found to be significant predictors.

Conclusion: This study brings out perinatal hypoxia and significant head trauma as preventable causes of childhood epilepsy. Family history of epilepsy and delayed development milestones warrants attention as early potential markers of childhood epilepsy.

Recommendations: Careful obstetric monitoring to prevent birth asphyxia. Creating public awareness of head trauma as a major yet avoidable risk factor of epilepsy. Children with delayed developmental milestones should be carefully monitored so as institute remedial and rehabilitation measures if epilepsy occurs.