

PP 89

Associated parental risk factors among epileptic patients attending to Teaching hospital, Anuradhapura: A Case Control Study

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Background: Epilepsy is a common neurological disorder of the brain, affecting around 65 million people worldwide. Reported risk factors associated with epilepsy are family history, head trauma, brain infection, prenatal injuries, and newborn distress. However, there is a paucity of data regarding associated parental risk factors of epilepsy especially in developing countries.

Objective: To determine the association between epilepsy and parental risk factors among epileptic patients

Method: This was an unmatched case control study. Two hundred diagnosed epileptic patients (male (52%), age 12-45 years) were recruited according to a consecutive sampling method from the neurology clinic at Teaching Hospital, Anuradhapura, Sri Lanka, as the case group. Patients with cerebral palsy, mental retardation, and psychiatric disorders were excluded. Only the first identified cases in each sibling were included while affected siblings were excluded. Two hundred controls (male (30%), age 12-45 years) were recruited according to random sampling method from the outpatient department at Teaching hospital, Anuradhapura, Sri Lanka, excluding those having any neurological disorders. An interviewer-administered questionnaire was used for both case and control groups to assess consanguinity, maternal age, paternal age, parental age gap and family history. Chi-square test was used for analysis.

Results: Parental risk factors associated with epilepsy were consanguinity [18.8% in epileptics vs 8% in controls, odds ratio (OR) 2.6, 95% confidence interval (CI) 1.4-4.9, $p=0.002$] and family history (18.3% vs 5.5%, OR 3.8, 95% CI 1.9-7.7, $p<0.001$). However, maternal age at child birth ($p=0.15$), parental age gap ($p=0.60$), and mode of delivery ($p=0.42$) were not associated with epilepsy.

Conclusion: Parental factors such as consanguinity and family history increase the risk of epilepsy among offspring. Therefore, it is advisable to prevent consanguineous marriages in the society through health awareness programs.