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Family History of Seizure and History of Birth Trauma among New Patients Attending Epilepsy Clinic of A Metro City In India

Dr. Sankhapani Mishra[1], Dr. Kanad Bag[2]
[1]*Assistant Professor, Department of Physiology, Murshidabad Medical College, Berhampore, Murshidabad, West Bengal University of Health Sciences, West Bengal, India*
[2]*Demonstrator, Department of Physiology, Murshidabad Medical College, Berhampore, Murshidabad, West Bengal University of Health Sciences, West Bengal, India*
Corresponding Author: Dr. Kanad Bag

Abstract:
Background*: Family history of seizure and history of birth trauma are known risk factors of epilepsy. These risk factors may be present or absent among patients of epilepsy. This study has been conducted to find out the presence or absence of family history of seizure and history of birth trauma among new patients attending epilepsy clinic of a metro city in India.*
Materials and Methods*: In this observational descriptive study all 85 new patients registered in the Epilepsy Clinic of Bangur Institute of Neuroscience and Psychiatry, Kolkata, West Bengal, India during the study period were enrolled. Family history of seizure and history of birth trauma were meticulously collected from the study subjects.*
Results*: Overall 15% of newly registered patients of epilepsy had positive family history of seizure. The percentage of positive family history of seizure among the patients of generalized seizure and partial seizure subgroups were also 15%. Overall 20% of newly registered patients of epilepsy had positive history of birth trauma. The percentage of positive history of birth trauma among the patients of generalized seizure was 15% and among the patients of partial seizure was 24%.*
Conclusion: *Positive family history of seizure among newly registered patients of epilepsy as well as generalized seizure and partial seizure subgroups were same i.e. 15%. Positive history of birth trauma was more among the patients of partial seizure (24%) than among the patients of generalized seizure (15%) and overall newly registered patients of epilepsy (20%).*
Key Word*: Family history of seizure, history of birth trauma, epilepsy.*

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I. Introduction

Epilepsy is a common chronic neurological disorder characterized by recurrent unprovoked seizure[1,2]. Family history of seizure and history of birth trauma are known risk factors of epilepsy. Of one billion people who live in India approximately ten million suffer from epilepsy and not much data is available regarding the incidence of the various etiologies of seizure disorder in this country[3]. This study has been conducted to find out the presence or absence of family history of seizure and history of birth trauma among new patients attending epilepsy clinic of a metro city in India.

II. Material And Methods

This observational descriptive study was carried out on new patients registered in the Epilepsy Clinic of Bangur Institute of Neuroscience and Psychiatry, Kolkata, West Bengal, India from January 2010 to June 2010. A total 85 subjects were enrolled for in this study.

Study Design: Observational descriptive study

Study Location: Epilepsy Clinic of Bangur Institute of Neuroscience and Psychiatry, Kolkata, West Bengal, India.

Study Duration: January 2010 to June 2010.

Sample size: 85 patients.

Sample size calculation: Complete enumeration.

Subjects & selection method: All new cases registered in the Epilepsy Clinic of Bangur Institute of Neuroscience and Psychiatry, Kolkata, West Bengal, India, during study period were enrolled for this study. In 1981, the International League Against Epilepsy (ILAE) published a modified version of International Classification of Epileptic Seizures that has continued to be useful classification system. This system was based

on clinical features of seizures and associated EEG findings[1]. This system was followed for diagnosis and classification of epilepsy in this study.

Inclusion criteria:
1. New cases registered.
2. Either sex
3. All ages.
4. Patients/ guardians who gave consent for clinical examination, interview and investigations.

Exclusion criteria:
1. Patients suffering from Syncope, conversion disorder, heart block, metabolic disorders, movement disorders.
2. Patients/ guardians who did not give consent for clinical examination, interview and investigations.

Procedure methodology

The research activity included obtaining permission, structuring and pretesting of schedule, anonymous data collection, compilation, analysis and write up. Ethical clearance was obtained from the competent authority after ensuring confidentiality. Written informed consent was obtained from patients/ guardians. The predesigned and pretested schedule was used to collect data from patients. The schedule included socio-demographic characteristics, details history of seizures, prodromal signs and symptoms, elementary and complex symptomatology, general and specific investigations.

Statistical analysis: The data was compiled in Microsoft Excel and analyzed by using simple table.

III. Result

Table no 1 Shows 46% and 54% of Study Subjects were suffering from Generalized Seizure and Partial Seizure respectively.

Table no 1: DISTRIBUTION OF STUDY POPULATION AS PER TYPES OF EPILEPSY

Types of Epilepsy	Frequency	Percentage
Generalized Seizure	39	46
Partial Seizure	46	54
Total	85	100

Table no 2 Shows 15% of newly registered patients of epilepsy had positive family history of seizure. The percentage of positive family history of seizure among the patients of generalized seizure and partial seizure subgroups were also 15%.

Table no 2: DISTRIBUTION OF STUDY POPULATION AS PER FAMILY HISTORY OF SEIZURE IN DIFFERENT TYPES OF EPILEPSY

Family history	Generalized Seizure		Partial Seizure		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Positive	06	15	07	15	13	15
Negative	33	85	39	85	72	85
Total	39	100	46	100	85	100

Table no 3 Shows 20% of newly registered patients of epilepsy had positive history of birth trauma. The percentage of positive history of birth trauma among the patients of generalized seizure was 15% and among the patients of partial seizure was 24%.

Table no 3: DISTRIBUTION OF STUDY POPULATION AS PER HISTORY OF BIRTH TRAUMA IN DIFFERENT TYPES OF EPILEPSY

History of birth trauma	Generalized Seizure		Partial Seizure		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Positive	06	15	11	24	17	20
Negative	33	85	35	76	68	80
Total	39	100	46	100	85	100

IV. Discussion

Family history of seizure and history of birth trauma have long been recognized as risk factors of epilepsy by many researchers. The univariate logistic regression analysis identified a history of febrile seizures, family history of seizures, birth difficulties and neonatal insults to be significantly associated with the development of lifetime epilepsy[4]. In their study, Olubunmi A. Ogunrin, Ademola Adeyekun, Philomena

Adudu stated that we however obtained a higher prevalence of 19.6% in our study for brain trauma and 5% for birth-related hypoxia[5]. Injuries at birth are one recognized source of chronic epilepsy[6]. Even though a small proportion of cases follow Mendelian inheritance patterns in epidemiologic terms family history may be considered an important risk factor for epilepsy. In absence of other information, epilepsy in a first degree relative increases the risk threefold[7].

V. Conclusion

Positive family history of seizure among newly registered patients of epilepsy as well as generalized seizure and partial seizure subgroups were same i.e. 15%. Positive history of birth trauma was more among the patients of partial seizure (24%) than among the patients of generalized seizure (15%) and overall newly registered patients of epilepsy (20%).

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