Original Article

DEMOGRAPHIC PROFILE OF PATIENTS WITH EPILEPSY IN A COMMUNITY CLINIC

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ABSTRACT

Objective: To study the Demographic profile of patients with Epilepsy.

Methodology: A descriptive study of five hundred patients with Epilepsy was counducted in, Ahbab Hospital, (Psychiatric Epilepsy clinic) Ravi Road, Lahore. All patients presented with seizures during that period were included in the study. Their detailed history and appropriate investigations were recorded on a study proforma. Epilepsy was classified according to EEG findings.

Results: Out of a total Five hundred patients with Epilepsy who visited Ahbab Hospital majority (62.9%) were of low socio-economic status and belong to rural areas of Pakistan. Males had Epilepsy (58%) more often compared to females (42%). The most common type was Generalized Tonic Clonic Seizure.70% of the patients came with Epilepsy only, 13.0%were having Depression and 10.1%were Mental Retardation and 4.1%had a problem of Attention Deficit Hyperactive Disorder. The results of the study conclude that Epilepsy is more common among population with low socioeconomic status in the rural areas and dominantly involves the males.43% of the subjects were suffering from Generalized Tonic Clonic Seizures. The risk factors for developing Epilepsy include a positive family history of Epilepsy.

Conclusion: Epilepsy is an important health problem. Identification of Demographic profile in a hospital setting will lead to more opportunities to improve preventive measures and quality of life in rural areas. It will also improve knowledge among rural backgrounds and health officials on the problems associated with this disease.

KEY WORDS: Epilepsy, Electroencephalography, Mental Retardation, Attention Deficit Hyperactive Disorder.

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INTRODUCTION

According to the Epilepsy foundation of America, Epilepsy is a physical condition that occurs when there is a sudden, brief change in how brain works. When brain cells are not working properly, a person's consciousness, movement or actions may be altered for a short time. These physical changes are called Epileptic Seizures. Epilepsy is therefore sometimes called a seizure disorder. Epilepsy affects people in all nations and of all races.

Epilepsy is widespread throughout the world, but higher incidence is reported in studies from developing countries. A comprehensive study carried out in Ecuador, with case ascertainment by a house-to-house survey

using stringent methodology; found an incidence rate of 122 per 100,000 per year.[1] Geographic influences have been hard to assess because of a lack of standard techniques but a consistent finding is that the prevalence rates higher in rural than in urban areas.[1] The reasons for this are unclear.

Around 30,000 people develop epilepsy every year and the condition will affect about one person in 20 at some time during their lives.[2] There are around 20 to 70 new cases of epilepsy per 100,000 people per year.[2] Many studies have reported a slightly higher incidence among men than women. The incidence is higher in the first two decades of life but falls over the next few decades only to rise again in later life. The cumulative incidence expressed as the chance of having Epilepsy in a lifetime is 2-5 percent.[11] The prevalence of Epilepsy vary but about five percent of people will suffer at least one febrile convulsion in their life and convulsions will recur in about half of these cases. The overall incidence of epilepsy (excluding febrile convulsions and single seizures) in developed societies has been found to be around 50 cases per 100,000 persons per year (with a range of 40-70/100,000/year).[3-6]

The usual prevalence quoted is 5-10 cases per 1000 persons, excluding febrile convulsions, single seizures and inactive cases,[3-6] independent of consideration of location. The lifetime prevalence of seizures (the risk of having a non-febrile epileptic seizure at some point in an average lifetime) is between 2 and 5%. The difference between lifetime prevalence and the prevalence of active epilepsy indicates that in most patients developing epilepsy either the condition remits or the patient dies. Results of recent community-based studies show that in most patients epilepsy is relatively short-lived: over two-thirds enter long-term remission and subsequent relapses are uncommon. The course of the condition in its early years is an important predictor of prognosis; the longer epilepsy remains active the poorer is the long-term prognosis.

Overall prevalence of Epilepsy in Pakistan is estimated to be 9.99 per 1000 population. Highest prevalence is seen in people younger than 30 years.[10] The cumulative incidence of febrile seizures - the risk of having a febrile seizure before the age of five - is about 5%. Febrile seizures account for a substantial proportion of seizures in children under five. About 3% to 4% of all children will have at least one febrile seizure.[12] The peak age for febrile seizures is 18 to 22 months with a range between about 6 months and 5 years.[13] By 7 years of age, 3% to 4% of children have one or more febrile seizures. They are slightly more common in boys.[14]

In this cohort of Epileptic subjects, we have studied the general profile of the patients and categorized the type of disease after investigations to study the profile and pattern in our own population. The demographic profile and information will help us to devise and improve the preventive measures for the disease.

MEHODOLOGY

This descriptive study was conducted at outpatient department of AHBAB Hospital, Ravi Road, Lahore. Five hundred patients suffering from seizure disorder were studied during October 2005 to September 2006. Patients of all ages and both sexes were included. Epilepsy was diagnosed on history, clinical presentation confirmed and categorized by EEG (Electroencephalography). Imaging could not be carried out, as the patients could not afford it.

All those patients with physical disorders (not related to Epilepsy) and psychiatric disorders and those who refused to participate were excluded. Data was documented on preformed Performa.

We have categorized the patients according to their monthly income i.e. Low socio-economic status whose income was less than 5000/month. Middle class whose income was upto 20000/month and high class whose income was more than 30000/month.

Data was computerized and various percentages and means ± SD calculated using SPSS software.

RESULTS

In all five hundred cases (both urban and rural, of all ages and both sexes) were studied. The frequency distributions were as follows. Table-I shows the Demographic profile among five hundred cases of Epilepsy. The Mean age of these patients was 17.7 ± 9.87 years. With a preponderance of males.i.e. 58%—were male, 42%—female. A positive family history of epilepsy was present in 60.0% most common among siblings i.e.34.3% and 3.8% among first-degree relatives and 47.7% had their first cousin marriages. Ahbab hospital is a special setting for patients with Epilepsy and the patients commonly seen are from distant and backward areas where cast consciousness and cousin marriages are encouraged therefore the percentage is high among first degree relatives.46.9% had a history of Febrile Convulsions. 3.2% subjects belong to urban areas and 96.1% belong to rural areas of Pakistan. 62.9% patients belong to Low socio-economic status while the rest of the patients i.e 37.1% belong to the middle group.

The most common seizure type was Generalized Tonic Clonic Seizures (GTCS) i.e 43%. The second most common type was Partial Seizures (PS) in 24% of the patinets. Secondary generalized Seizures i.e. 20%, Partial complex seizures (PCS) in 6% of the patients. Absence Seizures in 4% and Myoclonic Seizures in 3% of the patients.

Co-morbid Psychiatric Disorder: As regards co-morbid psychiatric disorder 70.0% patients had Epilepsy only.13.0%patients were also having depression, 10.1% of the patients were Mentally Retarded among them 4.1% had a problem of Attention Deficit Hyperactive Disorder.

Table-I: Demographics profile among 500 cases with Epilepsy.

		Percentage
Age		17.70 ± 9.87years
Sex	Male	58%
	Female	42%
Family history of Epilepsy		60.0%
History of Febrile Convulsions		46.9%
Area of Living		
	Urban	3.2%
	Rural	96.1%
Socio-economic Status	Low	62.9%
	Middle	37.1%
Relation	Siblings	34.3%
	First degree relatives	3.8%
First cousin Marriages		47.7%

DISCUSSION

The purpose of this study was to establish the demographic profile of patients with epilepsy in a community clinic. The etiology of epilepsy was based on history, neurological findings and diagnostic investigations. The mean age of these patients were 17.7 with a preponderance of males i.e.58% vs. 42% who were Female. The results of this study compare favorably with earlier study in which there was a slightly higher incidence among men than women,[11] though epilepsy affects men and women equally. It affects the two extremes of age. i.e. the very young and the very old, although anyone can get it at any age. About 62.9% patients belong to Low socio-economic status while the rest of the patients i.e 37.1% belong to the middle income group. Most of the patients i.e 96.1% belong to rural areas of Pakistan. Earlier studies have shown that Geographic influences have been hard to assess because of a lack of standard techniques but a consistent finding is the prevalence rates higher in rural than in urban areas.[1] The literature search and our own observations showed that the reasons are not clear but it is felt that this may be due to social deprivation.[7] People from socio economically deprived backgrounds in developed countries are more likely to develop epilepsy.[8] The reasons for this are not clear. The figures for developing countries are higher in the range of 100-190/100,000/year.[9] Febrile convulsions occur in at least 46.9% of children, between the ages of 6 months and 5 years. The seizure is typically generalized and occurs in association with fevers. The risk factors for

development of epilepsy as a complication of febrile seizure include a positive family history of epilepsy and they had their first cousin marriages i.e. 47.7%. Tonic Clonic was the most frequent type of epilepsy i.e. 43%. Patients with epilepsy are at high risk for depression because of an incompletely understood combination of factors that may be both psychosocial and neurological. Depression in patients with epilepsy is an under treated condition, because of concern regarding drug interactions. The study also shows that epilepsy affects the work, family, and social life of patients. For one in three young people with mild or severe forms of epilepsy, the main effect was on schooling and education. Children with Epilepsy are known to be prone to educational underachievement as a result of learning and behavioral problems.

CONCLUSION

Epilepsy is an important health problem. Identification of Demographic profile in a hospital setting will lead to more opportunities to improve preventive measures and quality of life in rural areas. It will also improve knowledge among these rural backgrounds and health officials on the problems associated with this disease. In conclusion majority of the patients with Epilepsy who visited Ahbab Hospital were of low socio-economic status and belong to rural areas of Pakistan. Epilepsy was more common in male as compared to females. The most common type was Generalized Tonic Clonic Seizure. 70% of the patients came with Epilepsy only, 13.0%were having Depression as well and 10.1% were suffering from Mental Retardation while 4.1% had a problem of Attention Deficit Hyperactive Disorder.

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