Original Research

Evaluation of Cases of Epilepsy in Adults in Medicine department

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ABSTRACT:

Background: Epilepsy is emerging as one of the most serious neurological disorders worldwide. The present study was conducted to assess cases of epilepsy in adults. **Materials & Methods:** The present study was conducted in the department of Medicine. It comprised of 96 cases of epilepsy of both genders. Patients were examined clinically. MRI and CT brain was done in all patients. Hb level, blood urea, serum creatinine, routine urine, TLC, DLC, ESR etc. was done in all patients. Type of seizures and concomitant illnesses were recorded. **Results:** Out of 96 patients, males were 59 and females were 37. Type of seizures were partial seizure with secondary generalization in 21 patients, mesial temporal lobe epilepsy syndrome in 13, typical absence seizure in 14, tonic–clonic seizure in 11, myoclonic seizure in 18 and epileptic spasms in 19. The difference was non- significant (P> 0.05). Type of concomitant illnesses was hypertension in 25, CVA in 12, diabetes in 22 and others in 14. The difference was significant (P< 0.05). **Conclusion:** Maximum cases in males and common type was partial seizure with secondary generalization.
Key words: Epilepsy, seizure, tonic–clonic

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INTRODUCTION

A seizure is defined as a paroxysmal episode due to abnormal excessive and synchronous neuronal activity occurring in the brain.[1] Epilepsy is emerging as one of the most serious neurological disorders worldwide. It is estimated that 5 to 10% of the overall world population will have atleast one seizure, predominantly occurring in infancy and late adulthood. The average range of epilepsy incidences is 0.3 – 0.5% in various populations throughout the world.[2]

It is believed this incidence is underestimated because of incorrect diagnosis of epileptic seizures.[3] The incidence of late-onset epilepsy is two times greater than childhood-onset epilepsy at 70 years of age and three times higher at 80 years of age. Most people with epilepsy have their first seizure before the age of 20 and it can affect their development.[4]

There is evidence of association between epilepsy and specific learning disabilities. The difficulties presented by children with epilepsy may be related to epilepsy itself and also to variables involved with the schooling process such as: low expectations from parents and teachers about their success, rejection from teachers and schoolmates and low self-esteem.[5]

The aids for diagnosis play a crucial role in the accuracy of made diagnosis. With advancement in technology, convenient and reliable diagnostic aids like magnetic resonance imaging (MRI) and video electroencephalogram (VEEG) are being used and even the smallest of structural abnormalities predisposing to epileptogenic foci are captured.[6] The present study was conducted to assess cases of epilepsy in adults.

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MATERIALS & METHODS

The present study was conducted in the department of Medicine. It comprised of 96 cases of epilepsy of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study.

General data such as name, age, gender etc. was recorded. Patients were examined clinically. MRI and CT brain was done in all patients. Hb level, blood urea, serum creatinine, routine urine, TLC, DLC, ESR etc. was done in all patients. Type of seizures and concomitant illnesses were recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Gender	Males	Females
Number	59	37

Table I shows that out of 96 patients, males were 59 and females were 37.
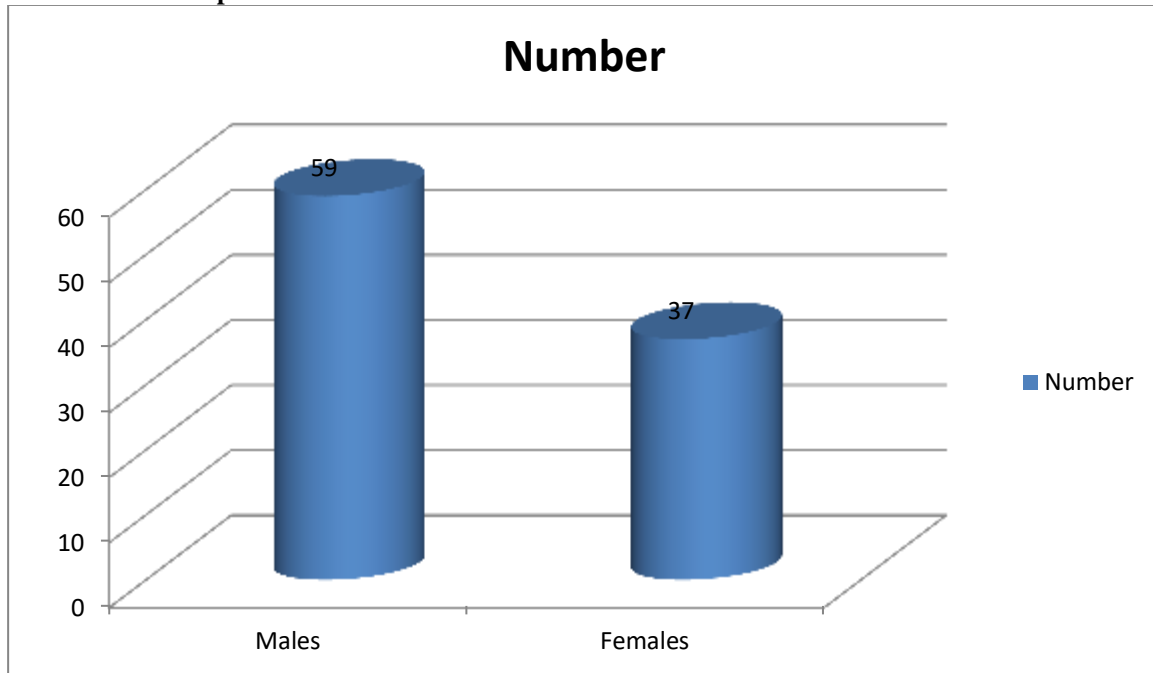
Graph I Distribution of patients

Table II Types of seizures

Type	Number	P value
Partial seizure with secondary generalization	21	0.08
Mesial temporal lobe epilepsy syndrome	13	
Typical absence seizure	14	
Tonic–clonic seizure	11	
Myoclonic seizure	18	
Epileptic spasms	19	

Table II, graph II shows that type of seizures were partial seizure with secondary generalization in 21 patients, mesial temporal lobe epilepsy syndrome in 13, typical absence seizure in 14, tonic–clonic seizure in 11, myoclonic seizure in 18 and epileptic spasms in 19. The difference was non- significant (P> 0.05).
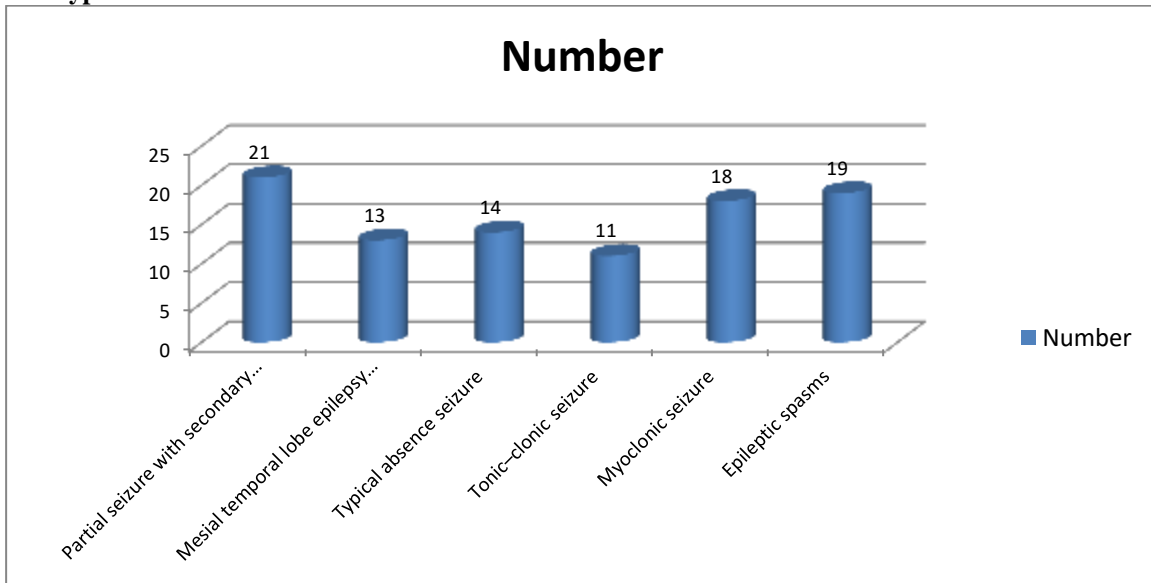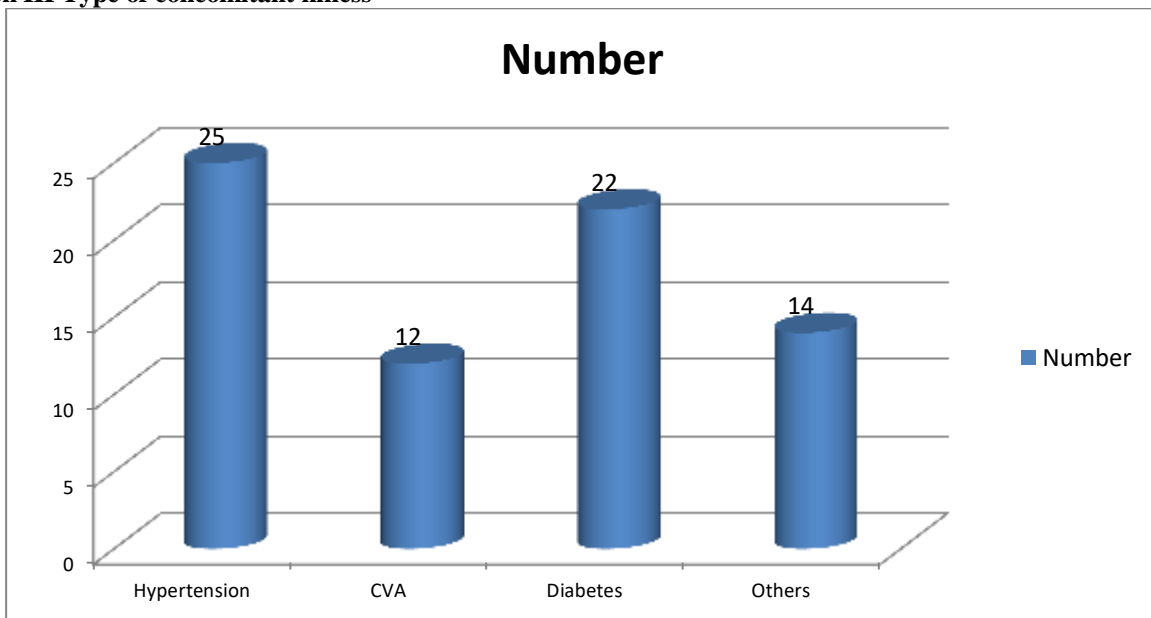
Graph II Types of seizures

Table III Type of concomitant illness

Concomitant illness	Number	P value
Hypertension	25	0.05
CVA	12	
Diabetes	22	
Others	14	

Table III, graph III shows that type of concomitant illnesses were hypertension in 25, CVA in 12, diabetes in 22 and others in 14. The difference was significant (P< 0.05).

Graph III Type of concomitant illness

DISCUSSION

Epilepsy is ranked either as the first or the second most common neurological disease in India. In India, the reported annual incidence of epilepsy is around 40–50 per 100,000 per year.[7] Despite being such a common disease, there is a significant treatment gap, especially in the low income countries. Epilepsy care in the developing countries differs from that in the developed countries because of cultural and economic differences.[8] Secondly, with less number of neurologists in the country, many times, the patient may visit a primary care physician, who may not be well-equipped with sufficient knowledge about the types of epilepsies and their management. It is important to understand the challenges in the diagnosis and treatment of epilepsy, and efforts should be made to reduce the treatment gap in epilepsy.[9] The present study was conducted to assess cases of epilepsy in adults.

In this study, out of 96 patients, males were 59 and females were 37. The type of seizures were partial seizure with secondary generalization in 21 patients, mesial temporal lobe epilepsy syndrome in 13, typical absence seizure in 14, tonic–clonic seizure in 11, myoclonic seizure in 18 and epileptic spasms in 19.

Sridharan et al[10] included 973 patients (males, 61.3%) with a mean age of 35.6 years. Only 3.6% patients were not educated whereas 45.3% patients were employed. Only 1.2% patients had a history of brain injury. The mean frequency of seizures during the previous 6 months was 24.0 ± 49.1 whereas the mean duration of epilepsy was 5.8 ± 5.8 years. Electroencephalogram was the most common (59.7%) investigation performed. A total of 109 (11.2%) patients had comorbid medical illness, with hypertension being observed in 3.3% patients. Levetiracetam was used in 583 (59.9%) patients whereas valproate, clobazam, and phenytoin were used in 16.3%, 14.8%, and 13.6% patients, respectively. Effectiveness and safety/ tolerability profile were the two most important considerations for selecting the AED. A total of 924 (95%) patients had seizure control with the current therapy during the previous 6 months whereas the mean seizure-free interval was 7.1 ± 4.1 months. Levetiracetam was used in 34.9%, 45.7%, and 61.1% patients and valproate in 15.2%, 10.9%, and 4.6% patients in the age group of 18–30, 31–50 and 51–75 years, respectively. Levetiracetam was used in 57.7% and 63.4% whereas valproate was used in 19% and 12.2% male and female patients, respectively. The adverse event rate was only 0.1%.

We found that type of concomitant illnesses were hypertension in 25, CVA in 12, diabetes in 22 and others in 14 cases. Goel et al[11] found that in the prospective study, the major cases of seizure patients were of cerebrovascular accident (45%), followed by idiopathic (27%), neuroinfection (15%), and alcohol withdrawal (4%). Whereas the stroke cases in elder age group was 62.5%. Katiyar et al[12] found that Out of 42 patients,

males were 25 and females were 17. Common etiology was vascular in 12 males and 8 females, post traumatic & degenerative in 10 males and 6 females and non-identified in 3 males and 3 females. Common findings were impaired consciousness in 13 males and 9 females, focal seizures in 6 males and 4 females, generalized tonic clonic seizures in 3 males and 2 females and multiple seizures in 3 males and 2 females. Common imaging findings was diffuse brain atrophy in 14 males and 10 females, isolated microangiopathy in 7 males and 4 females and microangiopathy with focal cerebral gliosis in 4 males and 3 females.

CONCLUSION

Authors found maximum cases in males and common type was partial seizure with secondary generalization.

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