

## Original Research

### Evaluation of clinical profile of patients with Epilepsy

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#### **ABSTRACT:**

**Background:** Epilepsy affects up to 1% of the population. The present study was conducted to assess clinical profile of patients with epilepsy. **Materials & Methods:** The present study was conducted on 62 patients of epilepsy. In all patients, causes, symptoms and radiographic findings were recorded. **Results:** Out of 62 patients, males were 38 and females were 24. Etiology of epilepsy found to be vascular in 20 males and 14 females, post traumatic & degenerative in 15 males and 8 females and non-identified in 3 males and 2 females. The difference was significant ( $P < 0.05$ ). Common findings were focal seizures in 27 patients, impaired consciousness in 10, generalized tonic clonic seizures in 18 patients and multiple seizures in 7 patients. The difference was significant ( $P < 0.05$ ). Common imaging findings were diffuse brain atrophy in 42 patients, isolated microangiopathy in 12 patients and microangiopathy with focal cerebral gliosis in 8 patients. The difference was significant ( $P < 0.05$ ). **Conclusion:** Epilepsy is a common neurological condition. Common imaging findings were diffuse brain atrophy, isolated microangiopathy and microangiopathy with focal cerebral gliosis.

**Key words:** Epilepsy, Neurological, seizures

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#### **INTRODUCTION**

Epilepsy affects up to 1% of the population, making it second to stroke as one of the most common serious neurologic disorders. About 50 million people world wide have epilepsy and 90% of them are from developing countries.<sup>1,2</sup> In the past several years, our understanding of epilepsy has increased in several respects. It is a common chronic neurological disorder in which the balance between cerebral excitability and inhibition is tipped toward uncontrolled excitability and characterized by recurrent unprovoked seizures.<sup>3-5</sup> There is now clear evidence that there are distinct differences between the immature and mature brain in the pathophysiology and consequences of seizures. It is a collection of many different types of seizures that vary widely in severity,<sup>6</sup> appearance, cause, consequence and

management Epilepsy affects up to 1% of the population, making it second to stroke as one of the most common serious neurologic disorders. About 50 million people world wide have epilepsy and 90% of them are from developing countries. In the past several years, our understanding of epilepsy has increased in several respects. It is a common chronic neurological disorder in which the balance between cerebral excitability and inhibition is tipped toward uncontrolled excitability and characterized by recurrent unprovoked seizures. There is now clear evidence that there are distinct differences between the immature and mature brain in the pathophysiology and consequences of seizures. It is a collection of many different types of seizures that vary widely in severity, appearance, cause, consequence and management Epilepsy affects up to

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the pathophysiology and consequences of seizures. It is a collection of many different types of seizures that vary widely in severity, appearance, cause, consequence and management.<sup>3</sup>

It is believed this incidence is underestimated because of incorrect diagnosis of epileptic seizures.<sup>4</sup> 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. There is evidence of association between epilepsy and specific learning disabilities.<sup>5</sup> 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.<sup>6</sup> The present study was conducted to assess clinical profile of patients with epilepsy.

**MATERIALS & METHODS**

The present study was conducted in the department of Medicine. It comprised of 62 patients of epilepsy of both genders. All were informed regarding the study and written consent was obtained Ethical clearance was taken prior to the study. Patients were recruited according to the ILAE recommended standard epilepsy diagnosis criteria. Epileptic seizures and etiology of seizures were defined according to the International League against Epilepsy (ILAE) classification and Nomenclature Committee Report, 2005–2009. The diagnosis was made with CT scan skull, magnetic resonance imaging (MRI) and electroencephalography (EEG).

General information such as name, age, gender etc. was recorded. In all patients, causes, symptoms and radiographic findings 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**

Total- 62		
Gender	Males	Females
Number	38	24

Table I shows that out of 62 patients, males were 38 and females were 24.

**Table II Etiology of epilepsy in patients**

Etiology	Males	Females	P value
Vascular	20	14	0.05
Post – traumatic and degenerative	15	8	0.01
Non- identified	3	2	0.15

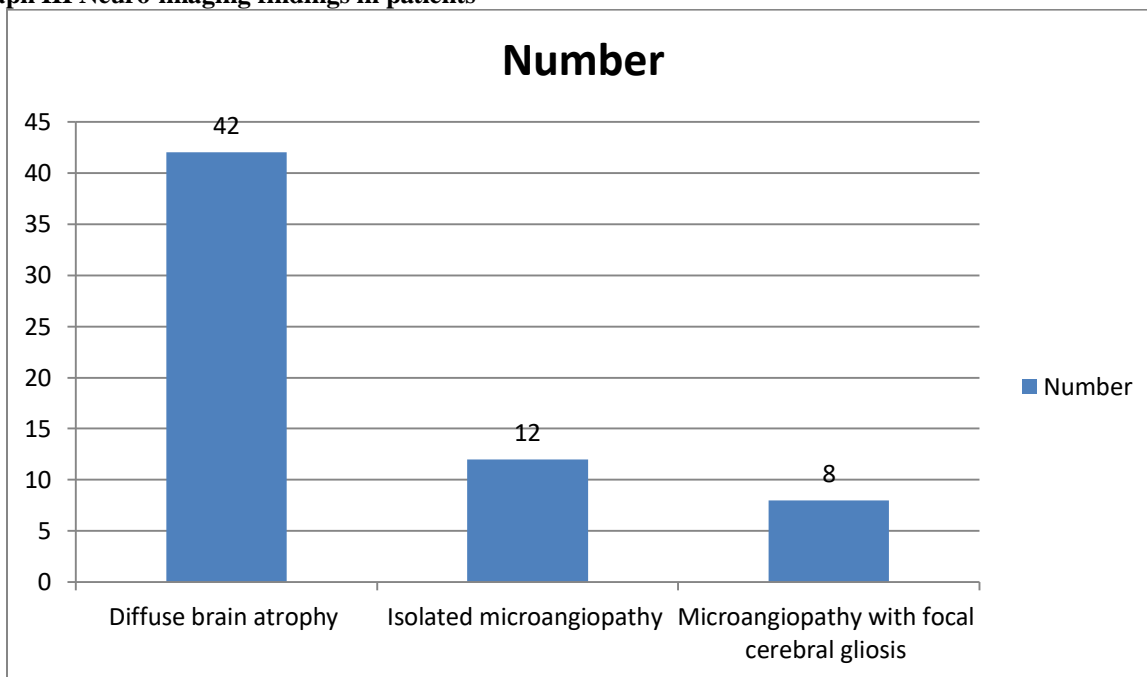
Table II shows that etiology of epilepsy found to be vascular in 20 males and 14 females, post traumatic & degenerative in 15 males and 8 females and non- identified in 3 males and 2 females. The difference was significant ( $P < 0.05$ ).

**Table III Clinical profile in patients**

Clinical profile	Number	P value
Focal seizures	27	0.01
Impaired consciousness	10	
generalized tonic clonic seizures (GTCS)	18	
Multiple	7	

Table III shows that common findings were focal seizures in 27 patients, impaired consciousness in 10, generalized tonic clonic seizures in 18 patients and multiple seizures in 7 patients. The difference was significant ( $P < 0.05$ ).

**Graph III Neuro-imaging findings in patients**



Graph III shows that common imaging findings was diffuse brain atrophy in 42 patients, isolated microangiopathy in 12 patients and microangiopathy with focal cerebral gliosis in 8 patients. The difference was significant ( $P < 0.05$ ).

**DISCUSSION**

Epileptic seizures often cause transient impairment of consciousness leaving the individual at risk of bodily harm and often interfering with education and employment. It is universal, with no age, sex, geographical, social class or racial boundaries.<sup>7</sup> Epilepsy is more likely to occur in young children or people above 65 years of age; however it can occur at any time. Epilepsy is not a single disorder but a syndrome with vastly divergent symptoms, involving episodic abnormal electrical activity in the brain. All epilepsy syndromes are not life- long some forms are confined to particular stages of childhood. Conventional treatment of epilepsy consists primarily of

anticonvulsant medications.<sup>8</sup> The present study was conducted to assess clinical profile of patients with epilepsy.

In present study, out of 62 patients, males were 38 and females were 24. Etiology of epilepsy found to be vascular in 20 males and 14 females, post traumatic & degenerative in 15 males and 8 females and non- identified in 3 males and 2 females.

Pi et al<sup>9</sup> found that 34.1% of patients had a clear cause of structural or metabolic epilepsy with the most common cause being cerebro-vascular disease (32.3%), followed by traumatic brain injury (29.0%), central nervous system infections (6.5%), brain tumors (9.6), cerebral hypoplasia (12.9%), neonatal intracranial

hemorrhage (3.2%), and rodenticide poisoning (3.2%). Secondary generalized tonic–clonic seizures were the most common type of seizure (53.8%), followed by mixed seizures (35.2%), focal seizures with impairment of consciousness and awareness (7.7%), and focal seizures without impairment of consciousness and awareness (3.2%). Among the 91 patients with active epilepsy, 13, 28, and 50 cases had low, moderate, and high seizure frequency, respectively. 64.8% of the patients received nonstandard treatments and 29.7% did not receive any treatment. The treatment gap for patients with active epilepsy within the past year was 93.4%. 117 people had active epilepsy in the past 5 years with ages ranging from 1 to 87 years old. The treatment gap for patients with active epilepsy within the past 5 years was 86.3%.

We found that common findings were focal seizures in 27 patients, impaired consciousness in 10, generalized tonic clonic seizures in 18 patients and multiple seizures in 7 patients. Common imaging findings was diffuse brain atrophy in 42 patients, isolated microangiopathy in 12 patients and microangiopathy with focal cerebral gliosis in 8 patients.

Another study was conducted by Upadhyay et al<sup>10</sup> to determine the prevalence of epilepsy disorders and drug utilization pattern in a patient population of Dehradun. A questionnaire was prepared that includes many practical questions regarding epilepsy seizure type, medication prescribed, their health status, and compliance. A total of 200 cases of epilepsy were reported. Results showed the prevalence of epilepsy disorders which was most common among males (65%) as compared to females (35%). 44% of epilepsy disorders were found prevalent among the age group between 30 and 40 years. The most common type of epilepsy disorder is primary generalized seizure (62%) followed by partial seizures (23%), focal disorder (6%), grand mal cortical focal epilepsy (5%), typical seizures (3.5%), refractory seizures (3%), and others (2.5%)

Berg et al<sup>11</sup> found that a total of 200 cases of epilepsy were reported. The study showed the prevalence of epilepsy disorders which was most common among males (65%) as compared to females (35%). 44% of epilepsy disorders were found prevalent among the age group between 30 and 40 years. The most common type of epilepsy disorder is primary generalized seizure (62%) followed by partial seizures (23%), focal disorder (6%), grand mal cortical focal epilepsy (5%), typical seizures (3.5%), refractory seizures (3%), and others (2.5%).

## CONCLUSION

Epilepsy is a common neurological condition. Common imaging findings were diffuse brain atrophy, isolated microangiopathy and microangiopathy with focal cerebral gliosis.

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