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Original ARTICLE

Assessment of clinico-etiological profile of children with epilepsy

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ABSTRACT
Background: Seizures in children are one of the most frequent reasons for consultation in the Pediatric Emergency Department. The present study was conducted to assess clinical profile of pediatric epilepsy cases. **Materials & Methods:** The present study was conducted on 62 children age ranged 5- 16 years of both genders. Patients were subjected to EEG, CT scan and MRI and all findings were recorded. **Results:** out of 62 patients, boys were 42 and girls were 20. Common clinical findings was vomiting in 52, lethargy in 46, fever in 32, cough in 26 , altered sensorium in 21 and ear discharge in 37. The difference was significant (P< 0.05). Common type was tonic seen in 22, clonic in 10, myoclonic in 8, absence in 5, atonic in 12, simple partial in 3 and complex partial in 2. The difference was significant (P< 0.05). **Conclusion:** Most common seizure was tonic, clonic and myoclonic. More cases were recorded in boys.

Key words: Boys, Epilepsy, Seizures

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INTRODUCTION

Seizures are defined as a transient occurrence of signs and symptoms due to the abnormal, excessive, or synchronous neuronal activity in the brain characterized by abrupt and involuntary skeletal muscles activity. The adjective "transient" in the definition, indicates a time frame with a clear onset and remission.[1]

Seizures in children are one of the most frequent reasons for consultation in the Pediatric Emergency Department (PED).[2] The causes of seizures are numerous and although in children in most cases they have a favorable prognosis, the onset of crises induces a tremendous psychological impact in the parents and caregivers. The principal risk factors for seizures in children are correlated with: positive family history, high temperature, mental disability, delayed discharge from NICU or premature birth, mother's alcohol abuse and smoking in pregnancy doubles the risk of seizure incidence.[3] Moreover in 30% of children in which the first episode of seizures occurs, the probability of recurrent episodes is increased. Instead risks factors of recurrent febrile seizures include: small age and duration of first episode of seizures, low temperature during the first episode, positive familiar history for febrile seizures in a first degree relative, short timeframe from temperature elevation, and seizure onset.[4] The present study was conducted to assess clinical profile of pediatric epilepsy cases.

MATERIALS & METHODS

The present study was conducted in the department of Pediatrics. It comprised of 62 children age ranged 5- 16 years of both genders. The study was approved from ethical committee. Parents were informed regarding the study and written consent was obtained.

Data such as name, age, gender etc. was recorded. A through clinical examination was done. Patients were subjected to EEG, CT scan and MRI and all 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	**Boys**	**Girls**
Number	42	20

Table I, graph I shows that out of 62 patients, boys were 42 and girls were 20.

Graph I Distribution of patients

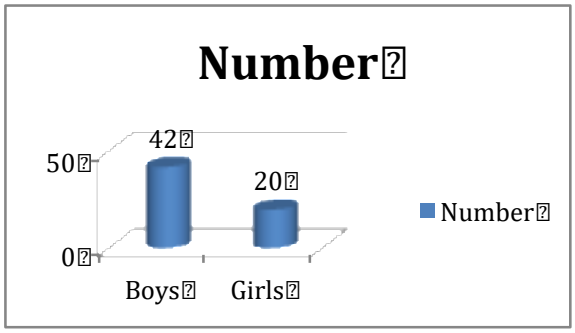
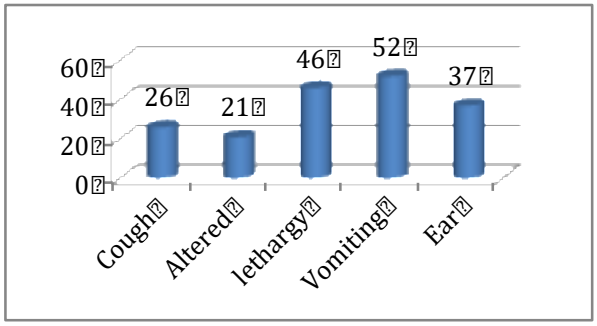


Table II Clinical features in patients

Clinical features	Number	P value
Fever	32	
Cough	26	
Altered sensorium	21	
lethargy	46	0.02
Vomiting	52	
Ear discharge	37	

Table II, graph II shows that common clinical findings was vomiting in 52, lethargy in 46, fever in 32, cough in 26 , altered sensorium in 21 and ear discharge in 37. The difference was significant (P< 0.05).

Graph II Clinical features in patients

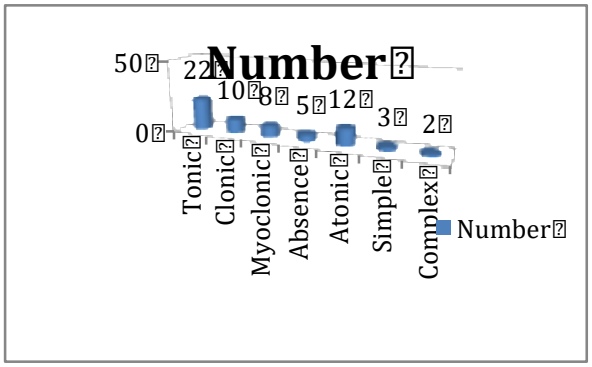


Graph III shows that common type was tonic seen in 22, clonic in 10, myoclonic in 8, absence in 5, atonic in 12, simple partial in 3 and complex partial in 2. The difference was significant (P< 0.05).

DISCUSSION

In epilepsy, a common problem is diagnostic accuracy as it can be diagnosed only by taking a history of the index event or by chance observation of a seizure.[5] The diagnosis is fundamentally a discretionary judgement which depends on the skill and experience of the physician and the quality of witness information available. Common sources of confusion are syncope or psychogenic attacks. As many as 10%-20% of cases referred to specialized epilepsy units with seemingly intractable seizures do not have epilepsy.[6] The present study was conducted to assess clinical profile of pediatric epilepsy cases.

Graph III Type of seizures in patients



In this study, out of 62 patients, boys were 42 and girls were 20. The exact mechanism of seizure onset is unknown. There could be either a deficit of neuronal inhibition or an excess of excitatory stimuli.[7] Most authors suggest that the onset of seizures depends on a deficit in the neuronal inhibition, in particular -Aminobutyric acid (GABA) deficit, the most important neurotransmitter of CNS; alternatively it depends on the alteration of the GABA function which determines a prolonged and high intensity stimulation. Other studies, in experimental animal models, demonstrated that N-methyl-D-aspartate (NMDA) and alpha-amino-3-hydroxy-5-methyl-4-isoxazole-propionic acid, both glutamate receptors, the most important excitatory receptor of CNS, are involved in seizure physiopathology. Febrile seizures occur in young children whose convulsive threshold is lower.[8]

We found that common clinical findings was vomiting in 52, lethargy in 46, fever in 32, cough in 26 , altered sensorium in 21 and ear discharge in 37. Common type was tonic seen in 22, clonic in 10, myoclonic in 8, absence in 5, atonic in 12, simple partial in 3 and complex partial in 2. Shrestha et al[9] found that incidence of seizures decreased with increasing age. The most common type of seizure was generalized tonic clonic seizure. Etiological analysis revealed CNS infections to be commonest cause of seizure in pediatric age group, followed by Space occupying lesions, epilepsy, febrile seizures and metabolic causes. Febrile seizures had best outcome while CNS infections had highest morbidity and mortality.

The most challenging condition, which happens to be treated during an emergency, is the status epilepticus. Because of this, diagnosis and treatment sections are focused on this clinical state. Clinical presentation in status epilepticus varies. It depends on the type of seizures, stage, and previous state conditions of the pediatric patient. Diagnosis is based on the identification of continuous or recurrent seizures, and it is easy to recognize during the clinical manifestation. After persisting status epilepticus, despite disappearance of motor manifestations, it is difficult to exclude non-epilepticus continuous status. A complete instrumental evaluation can be requested in case of first clinical presentation of SE, or in case of complicated SE, comorbidity, and in infants.[10]

CONCLUSION

Most common seizure was tonic, clonic and myoclonic. More cases were recorded in boys.

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