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Original Research Paper

General Medicine

A STUDY OF ETIOLOGICAL AND CLINICAL PROFILE OF ACUTE SYMPTOMATIC SEIZURES IN ADULTS

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KEYWORDS :

INTRODUCTION

The word seizure is derived from Latin word "Sacire" meaning 'to take possession of'. Seizure disorders are found Epilepsy can be broadly divided into idiopathic and symptomatic disorders. Idiopathic epilepsies are not associated with brain lesions or neurological abnormalities. They tend to be self limited and often respond well to antiepileptic therapy.An acute symptomatic seizure was defined in a recent recommendation from the International League Against Epilepsy (ILAE) as a clinical seizure occurring in close temporal relationship with an acute central nervous system insult which may be metabolic, toxic, infectious or inflammatory Seizures are common disorders found all over the that may require urgent attention and treatment to reverse world and are encountered frequently during medical potentially damaging causes. Such seizures are practice in variety of settings. Annually approximately considered to be an acute manifestation of the insult and 150,000 adults will present with a first seizure in the may not recur when the underlying cause has been United State[1]. India is home to about 10 million people removed or the acute phase has elapsed. The knowledge with epilepsy (prevalence of about 1%). An epileptic of the etiologic risk factors of acute symptomatic seizures seizure is an episode of neurologic dysfunction in which in third-world countries will invariably contribute to the abnormal neuronal firing is manifest clinically by changes effort aimed at preventing and managing medical conditions frequently complicated by seizures. The differential diagnosis of a single seizure includes psychogenic non-epileptic events, cardiac and neurogenic syncope, transient ischemic attacks, sleep disorders, and panic attacks.

AIM OF THE STUDY

1) To study the etiological profile of acute symptomatic seizures in various age groups,
2) To assess the common seizure type in patients with acute symptomatic seizures of varied etiologies
3) To study the Electro Encephalographic and Radiological profile of Acute symptomatic seizures.

METHODS AND MATERIALS

The study was done in the setting of the department of General medicine, Meenakshi Medical College and Research Institute, Kanchipuram, and the study was designed to analyse all adult patients who are more than 16 years of age in whom the specific cause for seizure could be identified. Sample size 150 and study period 1year.

The study was approved by the institutional ethical committee and carried out in a tertiary care hospital

INCLUSION CRITERIA

All adult patients who presented with acute seizures in whom the specific cause for seizure could be identified

EXCLUSION CRITERIA

1. Age less than 16 year
2. Known epileptic patients
3. Patients with family history of seizure

Each patient was explained about study and written informed consent was taken. A detailed history was taken from all patients and eyewitness. All patients were clinically evaluated and thorough clinical examination was done as per protocol. Each patient was subjected to hematological, biochemical and radiological investigations. Depending upon the suspected etiology, patients also underwent certain specific investigations were done. A CT scan of the head was done in all patients. The scan was performed without and with injection of contrast material. EEG was not available on an urgent basis hence it was performed in the inter-ictal period on an elective basis within the first 48 hours since a seizure. MRI was done in all patients where CT scan was non-diagnostic or inconclusive.

RESULTS

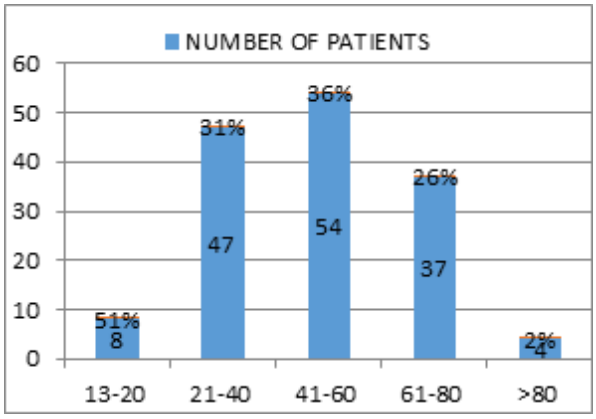
In this study 150 patients were evaluated clinically and using EEG and Neuro imaging In this study 86 were males and 64 female Male preponderance more in this study than compared to female.Common age group affected 40-60 next affected age group 20-40.Seizure type classifed in this study generalized 65% and partial 23%

BASED ON SEX

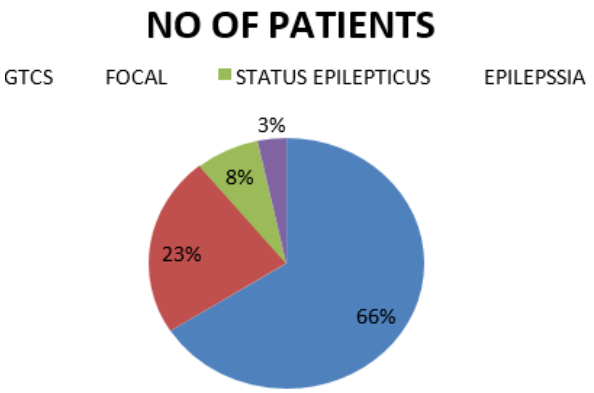
SEX	NUMBER	PERCENTAGE
MALE	86	57.3%
FEMALE	64	42.75%

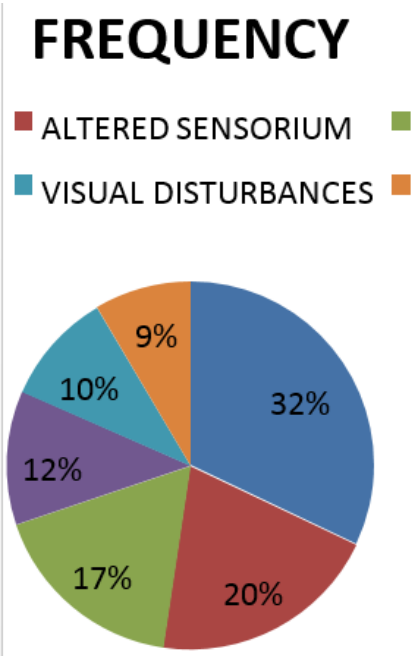
BASED ON AGE

AGE GROUP	NO	PERCENTAGE
13-20	8	51%
21-40	47	31%
41-60	54	36%
61-80	37	26%
>80	4	2%



Head ache ,vomiting,altered sensorium are the other non convulsive symptoms Headache presented in 68% of cases while altered sensorium in 43% of cases. Previous history of Diabetes was present in 14 patients and Hypertension present in 24patients.Metabolic abnormalities contributed to etiology in 13% of patients. The common abnormalities were Hyperglycemia and Hypoglycemia.





BASED ON SEIZURE TYPE

SEIZURE TYPE	NO OF PATIENTS	PERCENTAGE
GTCS	97	65%
FOCAL	34	23%
STATUS EPILEPTICUS	11	7%
EPC	5	5%

BASED ON COEXISTENT NON-CONVULSIVE SYMPTOM

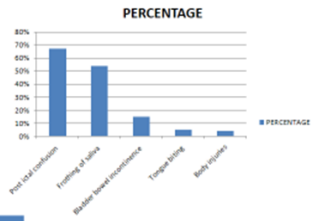
SYMPTOMS	FREQUENCY
HEADACHE	68%
ALTERED SENSORIUM	43%
VOMITTING	37%
FEVER	25%
VISUAL DISTURBANCES	21%
LIMB WEAKNESS	18%

In this study also patients having keto acidosis Blood sugar >450 exhibited high incidence of seizures and the sodium was found to be below 115 in hyponatremic patients.EEG was done in 114 (76%) patients in the study. Abnormalities were found in 92 (81%) of the EEGs done.

The yield of abnormalities in the EEG in this study could have been better if it were done more early or special methods such as continuous EEGs.The most common abnormality in EEG was sharp & spike waves and poly spike activity. CT scan was done in all patients . When CT was inconclusive in revealing the lesion MRI was done. Imaging abnormalities contributed to the etiologies in 52% of patients. CT revealed abnormalities in 31 out of 36 and the rest of the 5 cases. 3 cases of Cortical venous thrombosis and 2 cases of Ischaemic stroke were revealed by MRI. Also in Neurocysticercosis inconclusive findings in the CT were revealed by MRI in 8 patients.

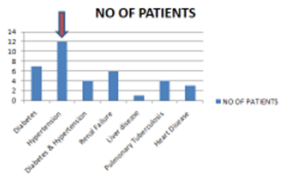
HISTORY SUGGESTIVE OF ORGANICITY

ORGANICITY	PERCENTAGE
Post ictal confusion	67%
Frothing of saliva	54%
Bladder bowel incontinence	15%
Tongue biting	5%
Body injuries	4%



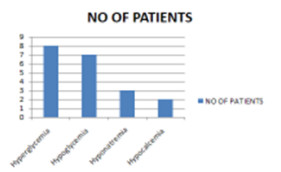
PROFILE OF SIGNIFICANT PAST HISTORY

PAST MEDICAL HISTORY	NO OF PATIENTS
Diabetes	7
Hypertension	12
Both diabetes &Hypertension	4
Renal Failure	6
Liver disease	1
Pulmonary Tuberculosis	4
Heart Disease	3

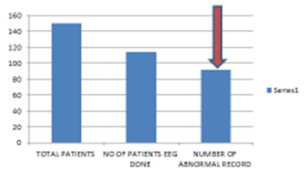


BASED ON METABOLIC ANORMALITY AND EEG

METABOLIC ABNORMALITY	NO OF PATIENTS
Hyperglycemia	8
Hypoglycemia	7
Hyponatremia	3
Hypocalcemia	2

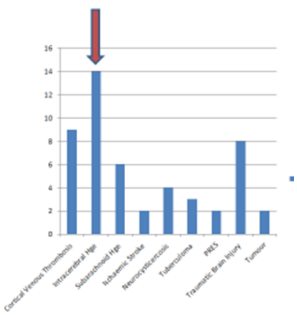


TOTAL PATIENTS	NO OF PATIENTS EEG DONE	NUMBER OF ABNORMAL RECORD
150	114	92



BASED ON CT FINDINGS

CT FINDINGS	NO
Cortical Venous Thrombosis	9
Intracerebral Hge	14
Subarachnoid Hge	6
Ischaemic Stroke	2
Neurocysticercosis	4
Tuberculoma	3
PRES	2
Traumatic Brain Injury	8
Tumour	2



CONCLUSION

Acute symptomatic seizures were more common in males than females and in 40 – 60 years of age. Cerebrovascular diseases were the most frequent cause of acute symptomatic seizures, followed by Acute CNS infections. Eclampsia and cortical venous thrombosis were the common etiology among females. We conclude that the EEG and radiological abnormalities were identified only 60% of the patients .Rest of the patients found to be metabolic causes.

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