



## “A PROSPECTIVE STUDY OF PROFILE OF ADULT PATIENTS ADMITTED WITH SEIZURES”

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**ABSTRACT** A seizure is a clinical manifestation of abnormal electrical activity in the brain. Although idiopathic generalised seizures are common in children, many other conditions can cause seizures in adults. This study was undertaken to identify the characteristics & aetiology in adult patients presenting with seizures.

**Aims & Objectives:** To study clinical features, types of seizures & causes of seizures in patients admitted Medicine department in tertiary care hospital.

**Materials & Methods:** This was a prospective observational type of study. The study was conducted on patients admitted in Medicine department of SKN Medical College & General Hospital, Pune during period March 2016 to Oct 2017. Total 31 patients were selected randomly who were admitted with one or more episodes of seizures (age > 18yrs). Data was collected in terms of history, clinical findings & laboratory parameters, neuro-imaging & EEG findings. Data was analysed using standard statistical tests.

**Results:** Generalised tonic clonic seizures were seen in 87.1%. Idiopathic seizures were seen in 45.16% patients & next common cause was CVA (22.58%). **Conclusion:** Although idiopathic generalised tonic clonic form of seizures are common, other causes like metabolic, structural neurological lesions like CVA should always be looked for in adult patients.

**KEYWORDS :** seizures, epilepsy

**Introduction:** The seizures are paroxysmal events due to abnormal excessive neuronal activities in the brain. A seizure can range from a fleeting subjective experience or a twitch through to a tonic-clonic convulsion. There are many forms and causes of seizures with distinct clinical and pathological characteristics. In childhood, idiopathic seizures are common. However in adults, other etiological factors are common in the form of CNS infections, cerebrovascular accidents, brain tumour, metabolic disorders, post traumatic, alcohol withdrawal, drug toxicity and poisoning etc. in women, the eclampsia and post puerperal causes are also common. In this prospective study, detailed clinical assessment of all cases was carried out along with relevant laboratory investigations, EEG, & neurological imaging study; to classify the seizures and to find out etiological diagnosis.

**Aims & Objectives:** 1) To study clinical features, type of seizures & causes of seizures in patients admitted Medicine department in tertiary care hospital.

**Materials & Methods:** This was a prospective observational type of study. The study was conducted on patients admitted in Medicine department of SKN Medical College & General Hospital, Pune during period March 2016 to Oct 2017. Total 31 patients were selected randomly as per following inclusion criteria.

**Inclusion Criteria:**

All patients of age > 18 years admitted in Medicine department with one or more episodes of seizures.

Cases fulfilling above criteria were selected for the study. Data was collected in terms of history, clinical findings & laboratory parameters. Their neuro-imaging & EEG findings were noted. Data was analysed using standard statistical tests. Results are presented in form of tables & graph.

**Results:** Total 31 patients were included in the study. Maximum age was 67 yrs & minimum age of 19 yrs with mean of 35.77 yrs. Male to female ratio 1: 2.8. Nine patients (29%) were admitted with first seizure i.e. new onset seizures; while 22 patients (71%) had recurrence. 12 patients (38.70%) had multiple episodes while 19 patients (61.29%) had single episode at the time of presentation. Of total 31 patients only 9 patients (29.03%) reported aura. Neuro imaging was done for all patients & only 11 (35.48%) were abnormal. EEG was done in 16 patients & 3 (18.75%) were abnormal. Generalised tonic clonic seizures were most common type as shown in table 1.

**Table 1: Type of seizures**

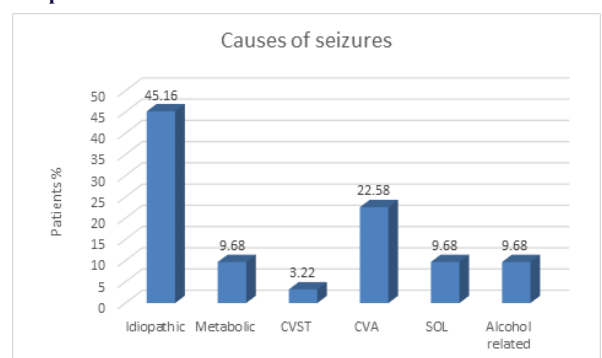
Type of seizures	No of patients	Patients %
Generalised tonic clonic	27	87.1
Focal	3	9.67
Complex Focal	1	3.22

Commonest cause for seizures in the study was idiopathic (45.16%) as shown in table 2. Other causes were metabolic, structural neurological lesions (35.48%), & alcohol related

**Table 2: Causes of seizures**

Causes of seizures	No of patients	Patients %
Idiopathic	14	45.16
Metabolic	3	9.68
CVST	1	3.22
CVA	7	22.58
SOL	3	9.68
Alcohol related	3	9.68

**Graph 1: Causes of seizures**



**Discussion:** A seizure is a clinical manifestation of presumed or proved abnormal electrical activity in the brain. Tendency to have recurrent seizures is called as epilepsy. Seizures can be either Focal or Generalised. Focal seizures are a result of abnormal activity that is localised or distributed within one hemisphere. It may manifest as motor, sensory, autonomic or psychic symptoms. Focal seizure may be associated with cognitive impairment (complex focal seizure) or without cognitive impairment (simple focal seizure). A focal seizure may become secondary generalised. Generalised seizures can be a) absence b) tonic clonic c) clonic, d) tonic e) atonic and f) myoclonic<sup>2</sup>.

Generalised tonic clonic seizures are common type as seen in many studies<sup>3</sup>. Causes seizures in adults include idiopathic, trauma, cerebrovascular accidents, CNS infections, metabolic (hypoglycaemia, hyperglycaemia, electrolyte imbalance, hepatic encephalopathy, uremia)<sup>5</sup> brain tumour (Space occupying lesion), alcohol related etc<sup>4</sup>. Thorough clinical assessment & laboratory investigations including neuroimaging are required to be done in adult patients presenting with seizures. Correction of underlying medical cause may avoid further episodes of seizures. In our study generalised tonic clonic seizures were most common & secondary causes were identified in 55% of patients.

**Conclusion :** Although idiopathic generalised tonic clonic form of seizures are common, other causes like metabolic, structural neurological lesions like CVA should always be looked for in adult patients.

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