



## STUDY OF ETIOLOGICAL FACTORS OF SEIZURES IN ADULTS MORE THAN 60 YEARS OF AGE- ADMITTED TO HSK HOSPITAL.

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### ABSTRACT

**Objective:** Not all seizures occurring during adult life are due to epilepsy. Many are acute symptomatic seizures. Acute symptomatic seizures can complicate acute encephalopathy caused by drugs or metabolic disturbances.

Thus this study done to assess etiological factors for seizure in elderly adults more than 60 years of age. **Materials & Method:** All Patients aged above 60 years who are admitted with history of seizure in H.S.K Hospital. Sample size: 128. Sample size calculated using open epi software.

**Results:** Study analyzed 131 patients admitted to HSK Hospital. In this analysis stroke (43%) was leading cause of seizure & encephalopathy (35%) being 2nd. **Conclusion:** Stroke & encephalopathy 2 common etiological factors of seizure in elderly. Among stroke, seizure occur frequently with infarction at presentation or as scar epilepsy. Many are acute symptomatic seizures which must be recognised to avoid inappropriate antiepileptic drug (AED) treatment. Analyzing etiological factors helps to discern epidemiological prevalence of etiological factors giving diagnostic clue when an elderly patient presents seizure.

**KEYWORDS :** Seizures, Epilepsy

### Introduction:

Not all seizures occurring during adult life are due to epilepsy. Many are acute symptomatic seizures which must be recognised to avoid inappropriate antiepileptic drug (AED) treatment. Acute symptomatic seizures can complicate any acute encephalopathy caused by drugs (particularly alcohol, cocaine, antidepressant over dosage) or metabolic disturbance (uremia, hepatic encephalopathy, etc). They are almost exclusively generalized tonic-clonic seizures that may sometimes be preceded by myoclonus. Also, acute symptomatic seizures can occur in association with acute cerebral insults such as head injury, stroke, and encephalitis; while their occurrence increases the risk of post-traumatic epilepsy the two are not inevitably linked.

Elderly people are the most rapidly growing segment of the population.

Elderly individuals with epilepsy are a unique subpopulation of patients with several important differences from younger people with epilepsy.<sup>1</sup>

The greatest increase in the incidence of status epilepticus occurs after the age of 60 years.<sup>2</sup> The most dramatic clinical presentation is generalized convulsive seizures. Because people are living longer and are more likely to have concurrent medical illnesses requiring multiple medications, physicians are increasingly challenged to provide appropriate management of seizures and monitoring of antiepileptic drug therapy in their older patients.

So our study aims at identifying various etiologies for seizure in elderly patients.

**Aims and objectives of the study:** To study the etiological factors for seizure in elderly adults more than 60 years of age.

### Materials and methods:

**Sample size:** All Patients aged above 60 years who are admitted with complaints /history of seizure in H.S.K Hospital during the study period i.e., from 1st January 2015 to 30th April 2017.

Calculated Sample size: 128

Sample size calculated using open epi software (According to A Study of Clinical Profile of Seizure Disorder in Geriatric Population by Dr. Ravi Prakash Pandey et al-Stroke was most common cause for seizure) Sample size calculated using 20% relative precision at 95% confidential limit.

### Source of data

Details of Patients aged above 60 years who are admitted with complaints /history of seizure in H.S.K Hospital during the study period i.e., from 1st January 2015 to 30th April 2017 taken from Medical record Section.

### Inclusion criteria.

1. Both male and female patients presenting with seizure
2. The patients aged more than 60 years.

### Exclusion criteria:

1. Patients presenting with seizure less than 60 years of age.

### Results:

The present study analyzed total 131 patients aged more than 60 years of age admitted to HSK Hospital Bagalkot. Among them 94 were male and 37 were female. 25 were diabetic and 34 were hypertensive.

Etiological analysis showed following results

Etiology	Number and %
Stroke n=56	56 (43%)
Ischemic stroke	25
Hemorrhagic stroke	11
Scar epilepsy	15
Cerebral venous thrombosis	2
Traumatic intracranial bleed	3
CNS Infection n=10	10 (7.5%)
Meningitis	4
Tuberculoma and Tubercular meningitis	4 (two each)
Neurocysticercosis	2
Tumours n=2	5 (4%)
Meningioma	2
Metastasis	3

Encephalopathy n=17	46 (35%)
Hyponetremia	9
Hypoglycemia	10
Hyperglycemia	4
Hypoxia	7
Uremia	5
Hypothyroidism	2
Hepatic	6
Alcoholic withdrawl	3

#### Age distribution

Age	Male	Female	Total
60-64	39	13	52
65-69	25	9	34
70-74	11	7	18
75-79	12	3	15
80-84	3	3	6
More than 85	4	2	6
Total	94	37	131

**Discussion:** Seizures are common disorders found all over the world and are frequently encountered during medical practice in variety of settings.

In this analysis stroke (43%) was leading cause of seizure with encephalopathy (35%) being second most common of seizure. Among stroke ischemic was more commoner than hemorrhagic. Among CNS infections maximum was due to meningitis.

Among the elderly 14 (11%) patients were known case of seizure disorder since there early life (Idiopathic).

Conclusion: Stroke as a whole and encephalopathy are two most common etiological factors of seizure in elderly. Among stroke seizure occur more frequently with infarction at presentation or as scar epilepsy. Hence special emphasis should be made on prevention of stroke so that the incidence of subsequent seizure can be prevented.

Not all seizures occurring during adult life are due to epilepsy. Many are acute symptomatic seizures which must be recognised to avoid inappropriate antiepileptic drug (AED) treatment.

By analyzing etiological factors it is helpful to discern epidemiological prevalence of defferent etiological factors thus get a diagnostic clue when an elderly patient present with seizure.

#### References

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