



ORIGINAL RESEARCH PAPER

Medicine

A study of Clinical Profile of Status Epilepticus in a Tertiary Care Hospital in Uttarakhand

KEY WORDS: status epilepticus, seizures, valproate, phenytoin.

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ABSTRACT

Status Epilepticus is an emergency which is being represented with very much paucity in current studies in India, even less so in Kumaun region of Uttarakhand. Aims and objectives: To study clinical profile of Status Epilepticus patients presented in Casualty[our emergency department]and Medicine wards of GMC Haldwani. Materials and Methods: This is a prospective study to ascertain clinical profile of status epilepticus patients of adult age group. We studied 136 cases of Status Epilepticus presented in medicine OPD of GMC Haldwani from July 2013 to July 2017 .Patients were initially stabilised by taking care of their airway ,breathing and circulation and were simultaneously put on specific treatment in form of loading doses of benzodiazepines or phenytoin. Detailed demographic and clinical data were collected at time of presentation. Results-we found that Status Epilepticus is more prevalent in males [66%],Urban area [56%]and elderly age group[80%]Lower socioeconomic stratum and convulsive seizures were predominantly represented. Conclusion: In our study we found significant differences in clinical presentation of Status Epilepticus in different age groups ,gender wise ,environment wise and with different risk/triggering factors.

INTRODUCTION-

Status Epilepticus is defined as continuous seizures or repetitive, discrete seizures with impaired consciousness in the interictal period with the duration of seizure activity to meet the definition traditionally been 15–30 minutes but more practically any situation requiring the acute use of anticonvulsants. In generalized convulsive status epilepticus (GCSE), this is typically when seizures last >5 min¹ It is a medical emergency associated with a poor outcome and there are increasing number of studies trying to systematically examine trends in incidence, precipitants and outcome in patients with an aim to look at potentially reversible factors to point for management and to improve prognosis. Epilepsy is one of the most common neurological diseases confronted not only by the physicians and neurologists, but also by primary care physicians and general medical practitioners. If the patient is non-compliant to antiepileptic drugs, chances to present as status epilepticus increases. There is paucity of studies and limitations of information available on the clinical profile of status epilepticus patients reporting at tertiary care hospital in Kumaun region of Uttarakhand. While searching literature, it was clear that there were none of the studies in this area or nearby, focusing on this common presentation. Considering all these points in a wider perspective, this study was planned and executed.

Materials and Methods: A prospective study of Status Epilepticus patients over 16 years of age was conducted at GOVERNMENT MEDICAL COLLEGE HALDWANI and DR STM GOVT HOSPITAL over four years (July 2013 to July 2017). Total patients enrolled were 136.

Methods of collecting data –Amongst the patients presenting to our casualty and wards, all above age 16 years were enrolled in the study. Ethical clearance was obtained from the institute ethics committee before enrolment. Both newly diagnosed patients and known case of seizure disorder presenting with SE were enrolled. Diagnosis was made clinically, and was supported by EEG, CT SCAN and MRI brain imaging whenever required. Imaging was done after control of status, mostly for ascertaining aetiology. After taking fully informed consent, detailed data regarding residence, prior history of AED, any prior event were collected.

Results – The study included 136 cases. Majority of the cases were male [66.17%]. Urban areas were represented more [55.88%]. Socioeconomically status was most common in low socioeconomic group, although non compliance to medication appeared to be a significant confounding factor, as low socioeconomic group were finding difficult to maintain themselves on any drug except phenytoin, because it has lowest cost. Age wise most of the cases were of more than 60 years group.

Old diagnosed cases presented more frequently in status than newly diagnosed cases.

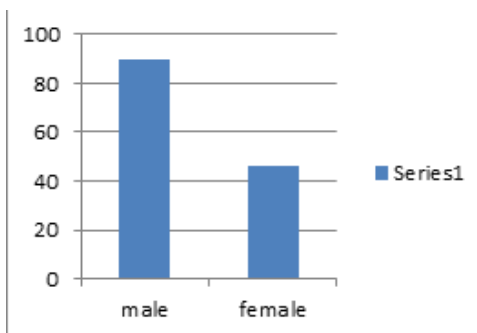


Figure 1 Sex ratio

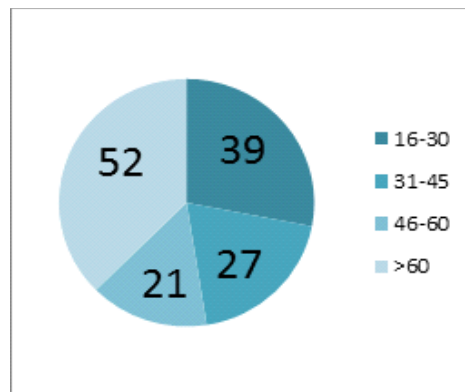


Figure 2 Age wise presentation

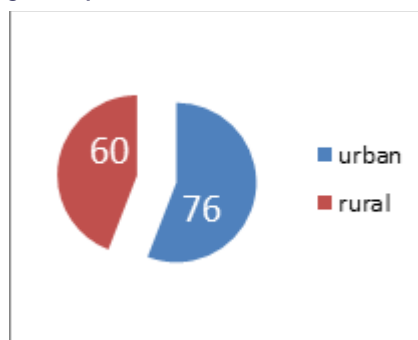


Figure 3 Residence Wise distribution

Table 1 Demography profile of patients of Status Epilepticus	
Demography pattern	Number (%)
Gender-Male	90[66.17]
Female	46[33.82]
Residence - Urban	76[55.88]
Rural	60 [44.11]
Socioeconomic status –Upper	32 [23.52]
Middle	44[32.35]
Lower	60[44.11]
Diagnostic status –Old	88[64.70]
Fresh	48 [35.29]
Age distribution 16-30 yrs	39[28.67]
31-45 yrs	27[19.85]
46-60 yrs	21[15.44]
>60 yrs	49[36.02]
Among Old patient medication –on single drug	61[69.31]
Multiple drugs	27[30.68]
Type of status -Convulsive	112[82.35]
Non convulsive	24[17.64]

Incidence according to risk factors	
Stroke	32[23.52%]
Medication noncompliance	22[16.17%]
Infection	19[13.97%]
Alcohol	26[19.11%]
Anoxia	15[11.02%]
Trauma	10[7.35%]
Unknown	12[8.82%]

Discussion – GABAergic mechanisms play a crucial role in terminating seizures. When the seizure persists, GABA-mediated mechanisms become ineffective and several other putative mechanisms of seizure suppression have been recognized. Early treatment of SE with benzodiazepines, followed if necessary by phenytoin administration, is the most widely followed strategy here. About a third of patients with SE may have persistent seizures refractory to the first-line medications. They require aggressive management with second-line medications .

Our study population was mainly from hills and plains of Uttarakhand along with nearest area of U.P. Present study shown male predominance, also reported by other studies ². Maximum cases were in elderly age group >60 yrs similar to previous studies ^{2,3} Maximum cases were pertaining to urban areas as opposed to rural, again similar to previous studies.

The socioeconomic stratum commonly involved was lower, which was in concordance with other studies showing predominantly lower socio economic strata involvement.

Most commonly associated risk factor was stroke, which was again in concordance with previous studies. it was followed by medication non-compliance, infection ,alcohol ,trauma and anoxia. ⁴ .Convulsive status was commoner than non convulsive .

Conclusion

In conclusion, our study provided information regarding the demographical etiological and clinical pattern of status epilepticus in a tertiary care centre in Uttarakhand. In solidarity with trends in rest of India, it's having male predominance, young age, urban area, low socio-economic status, and there is a need to convey the society that early detection and management is as essential for saving the life of patient, as medication compliance is for prevention of status epilepticus.

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