International Journal of Research in Medical Sciences
Verma K et al. Int J Res Med Sci. 2020 Jul;8(7):2547-2550
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20202893

Original Research Article

Profile of epileptic patients at a tertiary care centre

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Received: 10 May 2020
Accepted: 02 June 2020

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ABSTRACT

Background: The present study was done in a tertiary care centre of North India to know the profile of epilepsy.
Methods: Total of 210 patients were selected during the period August, 2017 to July 2018 who attended outpatient clinic of the Department of Neurology, Indira Gandhi Medical College, Shimla, Himachal Pradesh. Detailed clinical history was taken, general physical examination, and routine blood examination were carried out.
Results: Of all the cases, sex ratio (male:female) was 2.39:1. A high proportion of cases (43.3%) were from lower-middle socio-economic group. 76.7% patients had generalized seizures. For 38.6% patients, frequency of seizures was more than 8 in the past 6 months. 71.9% of the patients were using only one anti-epileptic drug.
Conclusions: Patients with seizures comprise a significant burden in inpatient department of developing countries.

Keywords: Anti-epileptic drug, Epilepsy, People with epilepsy, Seizure

INTRODUCTION

A seizure is defined as a transient occurrence of signs and/or symptoms due to the abnormal excessive or synchronous neuronal activity in the brain.[1] The estimated prevalence and average annual incidence rate have been reported to be 572.8 per 100,000 and 27.27 per 100,000 per year, respectively in India.[2]

The epileptic seizure temporally subdivides the clinical state of the PWE into two distinct periods of time: ictal (peri-ictal) and inter-ictal. The essential focus of pharmacologic treatment of epilepsy is to hamper the ictal phenomenon. In general, this is achieved in about two thirds of cases. The most common refractory epileptic disorder is the Temporal Lobe Epilepsy (TLE) that afflicts 40% of adult PWE.[3,4]

It is one of the most common entities encountered by neurologists in the emergency and outpatient setting.

Epilepsy can be accompanied by changes in cognition and behaviour and can also be associated with psychiatric illness. Psychiatric co-morbidity with epilepsy may precede, co-occur or follow the diagnosis of epilepsy. The increased risk for psychiatric disorders in epilepsy can be related to a number of clinical, psychosocial and biological factors.

Clinical profile of epileptic patients has been reported in many studies in India; however, data are lacking from our population. Hence, the present study was aimed to evaluate clinical profile of epilepsy.

METHODS

The diagnosed epileptic patients (age >15 years of either sex) visiting outpatient clinic of Department of Neurology at Indira Gandhi Medical College, Shimla from August 2017 to July 2018 were included in the study. The patients with any other chronic medical

illness, neurocognitive disorders, mental retardation, previously diagnosed with psychiatric disorder, refusing to give informed consent, and pregnant women diagnosed with epilepsy were excluded from the study.

A written informed consent was obtained from all eligible patients before participating in the study. A detailed history from the patient and/or a reliable person who knows the patient well was taken as per pre-designed recoding format.

Socio-demographic and clinical data was obtained from the patients, relatives and recorded using structured formats. Data were presented as frequency and percentages.

RESULTS

Two-hundred and ten patients were included in the study after they followed inclusion criteria. Mean age of the participants in the present study was 32.9±9.72 years.63% of the patients aged up to 35 years (Figure 1).

Among 70.5% of the patients were males (Figure 2). 95% patients belonged to rural areas (Figure 3). 27% patients were single or separated (Figure 4). 99% patients were Hindu (Figure 5). Only 16.7% patients were skilled workers (Figure 6). 10.5% were illiterate (Figure 7) and majority of the patients belonged to lower middle class (Figure 8).

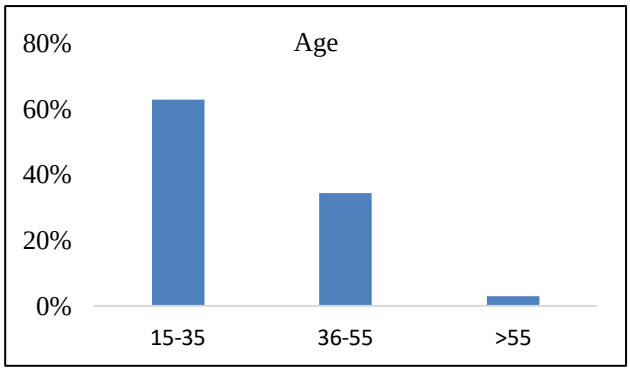

Figure 1: Age distribution of study participants.

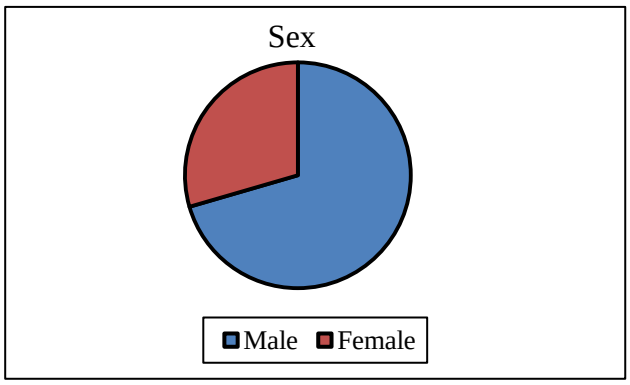

Figure 2: Sex distribution of study participants.

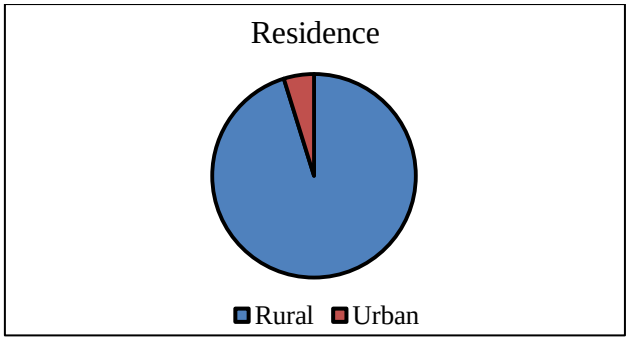

Figure 3: Residence distribution of study participants.

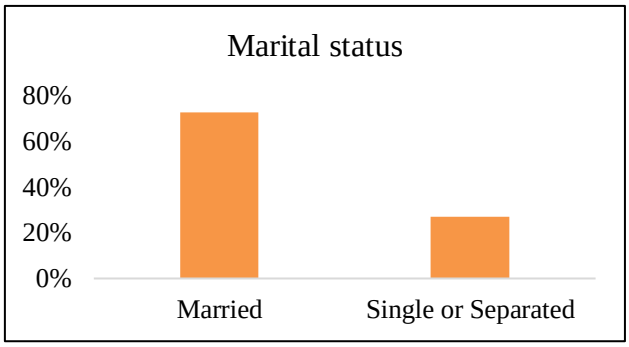

Figure 4: Marital status based distribution of study participants.

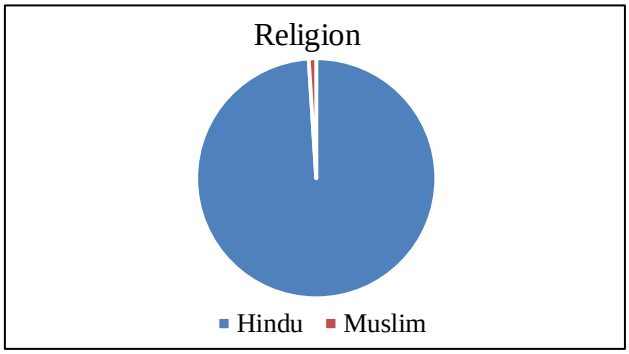

Figure 5: Religion based distribution of study participants.

Figure 6: Occupation based distribution of study participants.

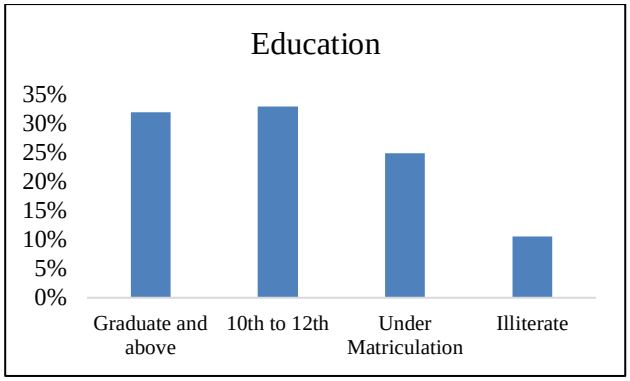

Figure 7: Education based distribution of study participants.

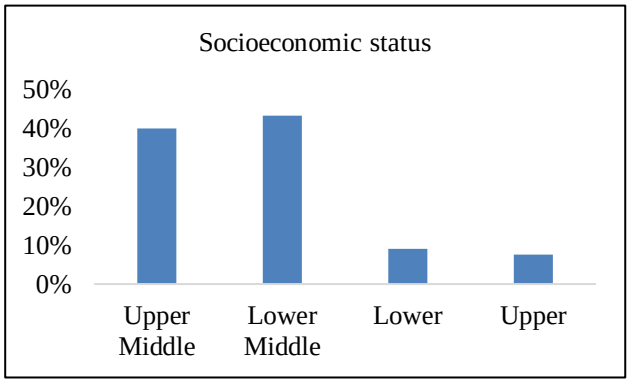

Figure 8: Socioeconomic status based distribution of study participants.

Type of seizures

In our patients, 76.7% of the seizures were generalized while in remaining 23.3% patients, focal seizures were present.

Frequency of seizures

In the past 6 months, 38.6% patients had seizures more than 8 times while only 6.7% patients had less than one episode of seizure in past 6 months (Table 1).

Table 1: Distribution of patients according frequency of epilepsy (n=210).

Frequency of epilepsy	Number of patients (n)	Percentage (%)
<1 seizure	34	6.7
1-4 seizures	32	15.2
5-8 seizures	83	39.5
> 8 seizures	81	38.6

Use of antiepileptic drugs

Among 71.9% of the patients were receiving only one anti-epileptic drug (AED). Levetiracetam was the most common AED used in our patients (36.1%) followed by carbamazepine (20.4%), and sodium valproate (15.4%). 28.1% of the patients were receiving more than one AED. Levetiracetam and sodium valproate was the most common combination used in our patients (11%) (Table 2).

Table 2: Distribution of patients according to number of antiepileptic drug used (n=210).

Antiepileptic drug	Number of patients	Percentage (%)
Sodium valproate	32	15.4
Carbamazapine	43	20.4
Levetiracetam	76	36.1
Sodium valproate and carbamazapine	11	5.1
Levetiracetam and carbamazapine	24	12
Levetiracetam and sodium valproate	34	11

DISCUSSION

It has been suggested earlier that epilepsy is common in early age. In present study, mean age of the patients was 32.9 years. Our findings are in concordance with Silbermanet et al, Goldstein et al. Male preponderance has been reported in our studies which is in agreement with the previous studies. Silberman et al reported 68% males and 32% females almost similar to our study.[5] There were 72% males and 28% females in a study by Goldstein et al, whereas Trinka et al. reported 74% males and 26% females in their study.[6,7]

Most of the patients in present study were from rural background (85.4%) similar to the study by Bredkjaer et al.[8] Higher representation of rural population in our study is in consonance with the Census data of 2011 from the state of Himachal, according to which more than 90% population of the state lives in villages. Another reason for large number of rural patients in our study could also be due to the higher number of patients being referred from peripheral health institutes of our state to this tertiary care centre.

In the study most of the patients were in the 10th to 12th standard group (32.9%) followed by 31.9% in graduate and 24.8% in 1st to 10th standard group while 10.5% were illiterate, study done by Torta et al., it was observed that only 21.7% were graduates and about half (45%) of the patients were in the 1st to 10th standard group.[9]

This difference could be explained on basis of good literacy rate in our state.

Majority (72.9%) of patients were married and 27.1% patients were either single or separated in the present study, which is almost similar to the study done Harden et al.[10]

In present study more than two third of patients had generalized seizures (76.7%). Patients were almost equal in number who had more than eight seizures and five to eight seizure in past six month, 31.3% and 32.1% respectively. Maximum number of the patients (71.9%) was on single antiepileptic drug. Study done by Babu et al. revealed that 62.4%, had generalized, 21.6% complex-partial, 8.8% simple-partial and 7.2% had unclassified seizures respectively.[11] 69% were on one antiepileptic drug and rest on more than one antiepileptic drugs.

One of the limitations of the study was that author could not study the outcome of those seizure patients which could have helped to understand the exact disease burden, mortality, and morbidity

CONCLUSION

Patients with seizures comprise a significant burden in inpatient department of developing countries.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Verma K, Sharma DD, Sharma RC. Profile of epileptic patients at a tertiary care centre. Int J Res Med Sci 2020;8:2547-50.