



12-2014

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### Recommended Citation

Ibrahim Siddiqui, Alam; Junejo, Badaruddin; Chander Dhingra, Lal; and Mumtaz, Anila (2014) "Pattern and outcome of epilepsy at department of neurology at cmc teaching hospital larkana," *Pakistan Journal of Neurological Sciences (PJNS)*: Vol. 9 : Iss. 4 , Article 7. Available at: <http://ecommons.aku.edu/pjns/vol9/iss4/7>

# PATTERN AND OUTCOME OF EPILEPSY AT DEPARTMENT OF NEUROLOGY AT CMC TEACHING HOSPITAL LARKANA

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**Date of submission:** June 28, 2014, **Date of revision:** August 17, 2014, **Date of acceptance:** September 22, 2014

## ABSTRACT

Epilepsy is third most common chronic neurological disease. Mortality is 2-3% more common in epilepsy patients than in general population. World wide survey have shown that epilepsy responds to treatment in about 70 % of epileptic patients and three fourth of the affected people do not get the treatment they need. So objective of our study was to know the outcome and pattern of epilepsy at Department of Neurology CMC teaching hospital Larkana ,so that in next step we could know which factors could reduce the morbidity and mortality due to epilepsy hence could prevent complications due to epilepsy. Total 404 patients were enrolled out of them 55 % were controlled and compared to world wide survey that in which 70 % of epileptic patients are controlled who get treatment so in comparison with world wide survey and this study there is gape of 15 % .

## INTRODUCTION

Neuropsychiatric disorders contribute 13.1% to global burden of disease <sup>(1)</sup>. Epilepsy alone accounting for 0.5% of global burden of disease <sup>(2,3)</sup>. Epilepsy is third most common neurological disease after stroke and alzheimer's disease <sup>(4)</sup>. Epilepsy affects 65million people world-wide have epilepsy 5.80 % of epileptic patients are found in developing regions <sup>(6)</sup>.The global prevalence of epilepsy is taken as 5-10 cases per 1000 persons <sup>(7)</sup>. The prevalence of epilepsy in pakistan is 9.99 per 1000 population<sup>8</sup>.The mortality rate among people with epilepsy is 2-3 times higher then general population and risk of sudden unexpected death due to epilepsy is 24 times greater.<sup>(9)</sup>. Seizures are manifestation of abnormal hypersynchronous or hyperexcitable discharges of the cortical neurons,sign and symptoms of seizures depends on the location of epileptic discharges in the brain <sup>(10)</sup>. Epilepsy is defined as a brain disorder characterized by enduring predisposition to generate epileptic seizures and by neurobiologic, cognitive ,psychological and social consequences of this condition <sup>(11)</sup>. Thus seizure symptoms are highly variable,but for most patients with one focus ,the symptoms are usually very stereotypic. Recent studies in both developed and developing countries have shown that up to 70 % of newly diagnosed children and adults with epilepsy can be successfully treated with antiepileptic drugs.

## MANAGEMENT

Management is according to condition of the patient,all necessary investigations according to state of patient should be sent to know the cause,those includes CT Scan, MRI of brain,Electroencephalogram ,and blood test . Pharmacology

therapy depends on type of seizure if there is no response then add on therapy is done,two third of the patients become seizure free after receiving 2nd or 3rd drug. Patient and patients family education is important regarding epilepsy and and they should be told that patient should have seizure free period of 3 or 5 years to switch off from antiepileptic drugs. Patient should be discouraged from participating in activities which increases the risk of injury or death,these activitie includes driving,operating highrisk power.

## METHODS

It was retrospective study done from OPD department of Neurology CMC teaching hospital Larkana from 2005 to 2013 t ,total 404 patients were included out of them 226 were children 178 were adults ,52 % were male and 48 % were female ,Generalized seizures were present in 236 patients,focal seizures in 168

### Inclusion Criteria:

All patients who were confirmed with diagnosis of epilepsy attending OPD of department of neurology were included in the study.

### Exclusion Criteria:

1-Patients who were having underlying cause like uraemia, hypoglycemia, hyperglycemia ,hepatic failure , toxic drug overdose or withdrawal and who were having infection were excluded from study .

2-For any reason patients who lost follow up were not included in study.

## RESULTS

Out of 404 patients 150 patients that is 37.18% completed

their treatment means after 5 years they were labeled seizure free .74 patients that is 18.31 % were controlled means they were seizure free but still on treatment .Number of defaulter were 149 that is 36.83% ,major causes of default was difficulty travelling to health care center and non compliance. Non-compliance was majorly due to side affects,non compliance was known through interview of the patient and in some patients drug level was done.

#### **Uncontrolled Patients:**

Number of uncontrolled patients was 31 that is 7.67 %,these patients wer those who were on treatment for 4 -5 years and still were suffering from seizures .

#### **PROGNOSIS**

Epilepsy responds to treatment in about 70 % of the patients ,They become seizure free within few years. In developing countries three-fourth of patients do not get treatment they need. 40% of patients will have recurrent seizures in presence of risk factors like epileptiform activity detected on EEG, Major head trauma 25 % of patients will have recurrence in 2 years if there are no risk factors. Patients with epilepsy have mortality rate 2-3 times higher than general population. Epilepsy related causes of death accounts for 40% of mortality in persons with epilepsy and includes the following, **1**-Death due to underlying neurological disorder in symptomatic epilepsy . **2**-Sudden unexpected death in epilepsy. **3**-Accidents during epileptic attack (trauma ,drowning ,burning , choking) **4**-Status epilepticus. **5**-Suicide. **6**-treatment related disease .

#### **DISCUSSION**

As mortality is two to three times more common in epileptic patients. In this study it was seen that 55 % of patients were controlled, 36.8 % were defaulters and 7.67 % patients were uncontrolled When cause of default was seeked by interview of patients, it was observed that due to non-compliance of patient because health center was too far to travel and patients were not affording cost of travel, traditional remedies were preferred ,no improvement with treatment and as seizure were improved they were leaving medicine and some of the patient were non-compliant due to adverse effects of drugs. As epilepsy is classified as a highly cost effective condition to treat, giving free drugs can lower the cost for patients with a possible higher adherence.

However drugs are not only expenses ,cost of travel were part of reason of the default from fromfollowup so as in our area we have arranged epilepsy camps providing free drugs monthly at remote rural area. In this study study it was observed most of the patients were not educated regarding epilepsy ,duration of treatment ,adverse effect of treatment and what activities should be restricted until seizures were controlled upto specific period and as epilepsy is 80 % found in developing region so having safe pregnancy ,ante-natal care ,control of infection these all thing combinely could reduce the morbidity and mortality due to epilepsy. Living in country where poverty ratio is high and education ratio is low we reached 55 percent of epilepsy patients who were controlled was in collabration with Rose Trust Formly Rabia Moon Trust our department arrange free camps ,monthly our one of doctor go there in khairpurmirus ,they provide free drugs educate them about disease by keeping this thing continue we could further reduce the morbidity and mortality due to epilepsy and percentage of controlled patients of epilepsy would be increased.

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**Conflict of interest:** Author declares no conflict of interest.

**Funding disclosure:** Nil

#### **Author's contribution:**

**Dr. Alam Ibrahim Siddiqi:** Study concept and design, protocol writing, data collection, data analysis, manuscript writing, manuscript review

**Dr. Badaruddin Junejo:** Data collection, data analysis, manuscript writing, manuscript review

**Dr.Lal Chander Dhingra:** Data analysis, manuscript writing, manuscript review

**Dr. Anila Mumtaz:** Data collection, data analysis, manuscript writing, manuscript review