RETROSPECTIVE ANALYSIS OF THE WORKING OF AN EPILEPSY CLINIC IN PESHAWAR

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SUMMARY

Specialised epilepsy clinic is an accepted service in the management of patients with epilepsy. The clinical details, specialised investigations, pharmacological therapy in the first two years of an epilepsy clinic in the neurology out-patient clinic at Lady Reading Hospital Peshawar is reviewed. Data was collected from a performa at initial referral and review appointments at audit. 379 cases were analysed among which 244 (64.4%) cases were under the age of thirty. A predisposing factor was identified in 45 patients (11.2 %). Mental subnormality was the most frequent predisposing factor. Electroencephalogram abnormality was identified in 56% of cases and a computerised tomographic scan of the head was abnormal in 17.6% of cases. 67% of patients were on monotherapy. Of the 379 cases 44.9% came for a follow-up review.

INTRODUCTION

Epilepsy is the second most common neurological problem seen by neurologists after headache.[1] There are estimated 50 million people worldwide with the condition.[2] Epilepsy is a diverse collection of clinical syndromes presenting with characteristic seizures as a consequence of abnormal synchronous and amplification of neuronal firing in electrically unstable areas of the brain.[3] Approximately 80% of the patients can be managed effectively with current pharmacological drugs.[4]

Epilepsy is a chronic disorder with a significant social and personal cost as evidenced by the high rate of unemployment and under employment among patients with epilepsy and are related to the facts that epilepsy often begins in childhood or early adult life and has a high prevalence.[5-7] Apart from the loss of confidence instilled by the unpredictable nature of the condition and the physical dangers produced by the seizure themselves, problems also arise from pre-existing or subsequent brain damage; side effects of anti epileptic medication and the patients as well as his family reaction to the diagnosis. The attitude of the society is still uncomfortable and unpitying[8] leading to either denial or concealment of the diagnosis.

The need for specialised investigation and long term management for optimising seizure control is of great importance to the patients. This favours the setting up of specialised epilepsy clinics.[9-15] There is no comprehensive service for the care of patients with epilepsy in the region. Any facility is at best patchy. One such clinic has been operational in the neurology outpatient clinic at Lady Reading Hospital, Peshawar since 1995. The working of the clinic is been reviewed in an audit and is presented here.

MATERIAL AND METHODS

This was a retrospective analysis of the case notes of all patients referred to the epilepsy clinic in the neurology out-patient

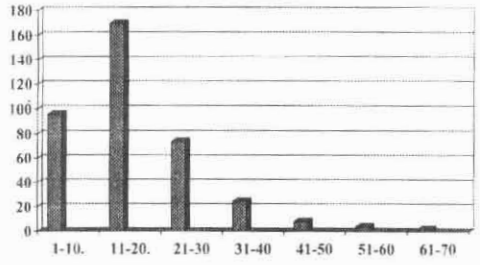

Fig. 1
AGE BANDS

department of Postgraduate Medical Institute, Lady Reading Hospital Peshawar over a two year period from 1st January 1996 to 31st December 1997. All patients were seen either by a consultant neurologist or by a trainee in neurology who had been instructed to the concept of the service. A history, clinical examination, investigations and medication recommended where documented in the designed forms in the notes kept in the clinic. The patients were allotted a number for retrieval of the notes on follow-up.

RESULTS

Demographic details:

Total number of patients referred to the epilepsy clinic was 417; of which 38 patients record were unavailable for review or had very little data and could not be analysed. The total number of cases analysed was 379. Age range was from 2 to 83 years; mean age of 27.4 years. The male to female ratio was 2:1; male 256(65.5%) and females 124(34.5%). The age range in decades is shown in the Figure 1. A positive family history of epilepsy was present in 61 (16%) of cases.

Seizure classification:

It was possible in most cases to classify the seizure type. Details were obtained both from the patient or an eyewitness relative or friend. Of the type of seizures presenting 254 (67%) were primary generalised tonic clonic seizures, 53 (13.7%) patients had focal seizures or focal seizures with secondary generalisation. 18 (4.7%) had complex partial seizures, 17 (4.4%) patients had partial seizures and 20 (5.2%) patients were non-classifiable. 11 cases (2.9%) were non-epileptic attacks, (Table II).

Predisposing factors:

In 45(11.2%) patients a possible predisposing factor was identified (Table I). In 169

TABLE – I
AETIOLOGY OF SEIZURES

Aetiology	No	%
Mental subnormality	20	5.2
Cerebrovascular accident	5	1.5
Menigitis/Encephalitis	8	2.1
Head injury	6	1.5
Brain Tumour	4	1.5
Cerebral Abscess	1	0.2
Eclampsia	1	0.2
Idiopathic	139	36.6
Cryptogenic	26	6.8
Unknown	169	45.5

TABLE – II
SEIZURE TYPE

Seizure type	Nos.	%
Primary generalised tonic clonic	254	67
Focal seizures with secondary generalisation	35	9.3
Focal seizures	17	4.4
Complex partial seizures	18	4.7
Generalised atonic seizures	4	1.1
Generalised Absences	15	3.9
Non epileptic attacks	11	2.9
Myoclonic seizures	5	1.3
Non classifiable	20	5.2

TABLE – III

DRUG THERAPY

Drug	Numbers	%
Carbamazepine	154	53.6
Valproic acid	81	28.2
Phenytoin	42	14.6
Phenobarbitone	9	3.1
Clonazepam	1	0.5

(45.5%) patients no etiological factor could be ascertained. 139 (36.6%) were idiopathic and 26 (6.8%) were of the cryptogenic type. Mental subnormality was present in 20 cases (5.2%); 8 cases (2.1%) had previous meningitis or encephalitis; six (1.5%) had had a significant head injury. Other causes identified were brain tumour, cerebral abscess and eclampsia.

Special Investigations:

On reviewing the investigations 225 (59.4%) had an electroencephalogram (EEG) done of which 126 (56%) showed some EEG abnormality. A Computerised scan (CT) of the brain was done in 51 (13.5%) and an abnormality was detected in 9 (17.6%).

Anticonvulsant therapy:

On reviewing the drug therapy of the patients 284 (75%) were on monotherapy, 56 (15%) were taking two antiepileptic drugs and only 5 (1%) were on more than two drugs. 34 patients (9%) were on no anti epileptic medication. Of the 287 patients on monotherapy 154 (53.6%) were on carbamazepine, 81 (28.2%) were on valproic acid, 42 (14.6%) were on phenytoin, 9 (3.1%) were on phenobarbitone and one patient (0.5%) was on clonazepam (Table III). None of the patients were on the controlled release preparation of carbamazepine and valproic acid, ethosuccimide, lamotrigine or vigabatrine.

Follow-up:

Of the 379 patients referred to the clinic 170 (44.9%) patients came back for at least one follow up visit and the rest 209 (55.1%) were lost to follow-up.

DISCUSSION

Despite recommendations in a number of recent reports, gaps and inconsistencies in epilepsy care exist both in primary and secondary care level in the management of epilepsies even in the western world.[16] Specialised epilepsy clinics has been recommended as a potential method for improving the care of patients with epilepsy.[9] The patients in the region are currently attending a variety of medical practitioners including general physicians, neurosurgeons, psychiatrists as well as paramedical staff and faith healers. In an audit of epilepsy clinic treatment was rationalised with the result of better seizure control and less side effects of anticonvulscents in 51% of cases.[11]

In our study there were less than expected cases of an underlying abnormality and the reason was that those patients were coming to the general neurology clinic and not recruited to the epilepsy clinic. The number of CT scans of the head were also less than expected and this was probably due to lack of CT services in the hospital due to faulty scanner over that period. Carbamazepine was the most common prescribed anticonvulscent (53.6%). The sedative anticonvulsant phenobarbitone was prescribed in 3.1%. Phenytoin was only prescribed in 14.6% of patients which was surprising given the low cost of the drug and the poor economic status of the patients. There were no patients on the new anticonvulsant drugs; this was due to unavailability of these drugs. The follow-up percentage was disappointingly low but this is a problem with chronic condition like epilepsy elsewhere also.[17] In a study from Glasgow one third of the patients were lost to follow-up.[11] Our study did not look into

treatment outcome of our patients and this will be looked into in the second leg of the study.

This study demonstrates the need for further improving of the services provided in the clinic, better documentation of events, improvement in the specialised investigations and better patient and family education.

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