



A TEN YEAR REVIEW OF DRUG PRESCRIBING PATTERN OF EPILEPSY PATIENTS FROM A CHILD AND ADOLESCENT PSYCHIATRY CLINIC

Pharmacology

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ABSTRACT

Background: There is serious paucity of services and scientific data in the field of child and adolescent psychiatry in India. The present study aims to provide Clinical data in regards with the drug prescribing pattern of Epilepsy patients, numerically the most common patients at our Child and Adolescent Psychiatry (CAP) Clinic over a ten year period.

Methods: Data was abstracted retrospectively from the records of patients attending the CAP Clinic of the JN Medical College, Aligarh over the period of 2007-2016. Pattern of drug prescription in the Epilepsy patients was extracted.

Results: Majority of the diagnosed Epilepsy patients (n=334) were males (63.17 %) of urban residence (77.54 %) who received monotherapy (78.74%). Valproate, Carbamazepine and oxcarbazepine were the commonest drugs.

Conclusion: Monotherapy with valproate and Carbamazepine are the most common prescribing pattern at our Clinic. Lamotrigine is a significant add-on drug to monotherapy.

KEYWORDS:

Child and adolescent, Drug prescribing pattern, Epilepsy,

INTRODUCTION:

India with a projected current population of 1.32 billion has the largest percentage of child and adolescent persons in the World. The Services for the Mental Health needs of this population are located mainly in the metropolitan cities and larger Academic Centers. Previous research data obtained from the Child and Adolescent Psychiatry (CAP) Clinics in India has shown epilepsy to be one of the commonest presentations in such settings.¹⁻⁴ The present study was done to obtain retrospective data on the drug prescribing pattern for epilepsy patients from the CAP Clinic of a sub-metropolitan Teaching hospital of Northern India.

METHODS:

The Department of Psychiatry at the JN Medical College, AMU, Aligarh is a general hospital psychiatry unit with outpatient and inpatient facilities in a tertiary care teaching hospital setting. The Department has been running a weekly walk-in CAP Clinic since January 2007. The data for all the patients diagnosed with epilepsy, and being prescribed at least one AED, over the time duration of ten years (2007-2016) was extracted. Patients with febrile seizures, status epilepticus or provoked seizures were excluded. The subjects who dropped out after registration in the Clinic were also not included in the study. The work up records of the subjects was analyzed for the socioeconomic data and the planned management. The data are recorded by the post graduate trainees under the supervision of a consultant in-charge. The extracted data was collated and described using descriptive statistics.

RESULTS:

The total number of included patients was 334, out of which 211 (63.17 %) were males and 123 were females (36.83 %). Most of them belonged to the 11-15 age group (n= 172, 51.49 %) and were of urban residence (n= 259, 77.54 %).

The average number of Anti Epileptic Drugs (AED) prescribed to each patient was calculated as per the formula: The total number of AEDs prescribed to all patients/ the number of patients i.e. 410/ 334 = 1.22.

Monotherapy was the preferred treatment option (n=263, 78.74 %). Valproate (n= 176, 52.69 %) was the most common agent used in our Clinic; followed by carbamazepine (n= 119, 35.63 %). Commonest dual therapy combinations included valproate with Carbamazepine (28, 08.38 %); and valproate with Lamotrigine (22, 06.58%)

Table 1: PATIENT CHARACTERISTICS:

	Numbers	%
Gender		
Male	211	63.17

Female	123	36.83
Age groups		
0-5	22	06.58
6-10	92	27.54
11-15	172	51.49
15 +	48	14.37
Residence		
Urban	259	77.54
Rural	75	22.46

Table 2: ANTIEPILEPTIC DRUG MONOTHERAPY:

Drugs	Number of patients	%
Sodium Valproate	108	32.33
Carbamazepine	88	26.34
Oxcarbazepine	51	15.26
Phenobarbitone	10	2.99
Phenytoin	06	1.79
Total	263	78.74

Table 3: ANTIEPILEPTIC DRUG POLYPHARMACY:

Drugs	Number of patients	%
<i>Dual drug therapy :</i>		
Valproate + Carbamazepine	28	08.38
Valproate + Lamotrigine	22	06.58
Valproate + Benzodiazepine ^a	07	02.09
Valproate + Phenobarbitone	06	01.79
Carbamazepine + Benzodiazepine ^b	03	0.89
<i>Triple drug therapy ^c:</i>		
Valproate + Lamotrigine + Clobazam	05	1.49

a – Clobazam: 05; clonazepam: 02.

b- Clobazam: 01; clonazepam: 02.

c- 02 cases of Landau- Kleffner Syndrome.

DISCUSSION:

Epilepsy is a clinical diagnosis made after a person has had two (or) more unprovoked seizures. Ideal goal in the management of epilepsy is complete control of seizures, if not attainable, a reduction in frequency; with minimal adverse effects.⁵ The present study was done by reviewing the records of diagnosed epilepsy patients, who were prescribed at least one AED from the CAP Clinic at the JN Medical College, AMU, Aligarh between the ten years of 2007-2016. The total number of included patients was 334, of which 63% were males. Previous epidemiological studies have shown this slight male

preponderance.⁶ About half of them belonged to 11-15 year age group, and urban residence was found in 77.5 % of them. The urban dominance probably reflects the unawareness and consequent lack of health seeking by rural population.⁷ The average number of AEDs prescribed was 1.22, which is similar to other previous studies conducted in India and abroad.⁸⁻⁹ The high percentage of monotherapy in our data is in disagreement with data from Italy, but matches to other Indian and Jordanian Government hospital data.^{6,10-11} Valproate is an AED effective in several types of epilepsy, and has thus gained popularity in prescriptions. The use of valproate in half of the patients is higher than the Malaysian and Indian data, but is in agreement with the Jordanian data.^{6,11} The dual therapy percentage, and the combination of Carbamazepine with valproate as the most common dual therapy combination is in agreement with previous data.^{6,9,11}

CONCLUSION:

The predominant use of monotherapy at our Centre is in agreement with therapeutic Guidelines. The dominant use of older AEDs possibly reflects a conservative and cautious approach in a vulnerable client population. Clinic based data remains important, particularly for service planning and resource allocation.

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Conflict of Interest: None declared.

Ethical approval: The study was approved by the Institutional Ethics Committee.

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