

Knowledge Regarding Lithium Therapy among Care Givers of Mentally Ill Patients

Sreejamol M G¹, Haripriya V R², Sheeja P Valsan²

¹Associate Professor, ²B.Sc. Nursing Students, Amrita College of Nursing, Amrita Vishwa Vidyapeetham, Kochi, Kerala, India

Abstract

Lithium has several less common but important metabolic adverse effects. Prevention and avoidance of risk factors are essential key to the management of lithium toxicity. Patient and the family education about early warning signs of all adverse effects and the need for immediate intervention regarding lithium therapy in clinical setting is unavoidable.

Aims: To determine the level of knowledge on lithium therapy among caregivers of mentally ill patient and find out the association between knowledge level and selected demographic variables

Method: Descriptive design was adopted. Sampling technique used was convenience and 60 subjects were selected.

Results: The study results showed that among the care givers, 55% had average knowledge, 38% had poor knowledge and only 7% had good knowledge regarding lithium therapy and there was a significant association between caregivers sex ($p=0.007$) and knowledge level, i.e. the females were having better knowledge than males. A significant association was found between education and knowledge ($p=0.02$) which revealed that those with higher education had better knowledge. An association between socio economic status ($p=0.007$) with knowledge regarding lithium therapy was also found. As majority of the caregivers were from middle socio economic status, the association found may be due to that.

Conclusion: The study result highlights the need for patients and care givers to be given ample information about lithium prior to commencement of treatment and an energizer educational program during lithium therapy.

Keywords: Knowledge, Lithium therapy, Care givers, Mental illness.

Introduction

Bipolar disorder is a very serious-but highly treatable brain disease¹. Bipolar disorder ranks among the top 10 causes of disability in developed countries worldwide. In other words, at any one time as many as 51 million

people worldwide suffer from bipolar disorder². Bipolar disorder affects about 60 million people worldwide. It typically consists of both manic and depressive episodes separated by periods of normal mood. People who have manic attacks but do not experience depressive episodes are also classified as having bipolar disorder. Effective treatments are available for the treatment of the acute phase of bipolar disorder and the prevention of relapse. These are medicines that stabilize mood³. Bipolar disorder is treated with three main classes of medication: mood stabilizers, antipsychotics, and, sometimes controversial, antidepressants. Typically, treatment entails a combination of at least one mood-stabilizing drug and/or atypical antipsychotic, plus

Corresponding Author:

Sreejamol MG

Associate Professor, Department of Mental Health Nursing, Amrita College of Nursing

Amrita Vishwa Vidyapeetham, Kochi-41, India.

Contact Number: 9946041314

E mail id: sreejamolmg@aims.amrita.edu

psychotherapy. The most widely used drugs for the treatment of bipolar disorder include lithium carbonate and valproic acid.^{4,5} Lithium carbonate can be remarkably effective in reducing mania. Lithium may also prevent recurrence of depression and credited for reducing suicides in depressive phases of the disease. Patients who take lithium carbonate are often noncompliant because of adverse effects, including hand tremor, diarrhea, vomiting, weight gain and decreased thyroid function.^{6,7} Knowledge about a drug and its effects may play an important role in establishing compliance because health beliefs are based, at least in part, on information.⁸ Many specialized lithium outpatient clinics therefore provide information brochures to patients.⁹ Factors affecting the long-term outcome of lithium prophylaxis are not completely understood, but compliance with treatment is probably an important predictor of outcome, as well as the occurrence and intensity of adverse drug reactions.¹⁰

The lithium toxicity and other side effects are very common among patients who are receiving lithium carbonate, because of the lack of knowledge of caregivers and patient regarding lithium therapy. However, evidence for an association between patients' knowledge about lithium treatment and subsequent behavior is sparse because there have been very few studies done.¹¹ So through the assessment we can determine their

knowledge level and adequate information can be given which will prevent the complications and helps in early identification of side effects¹². So there is an imminent need for the assessing the level of knowledge of patient and caregivers regarding lithium therapy.

Materials and Method

A Quantitative research approach with descriptive design was adopted to assess the knowledge level of caregivers regarding lithium therapy. The setting of the study was a Psychiatric Department of a tertiary care hospital Kochi. Sixty caregivers of mentally ill. On lithium therapy were selected as sample. The data was collected by using self structured questionnaire for the assessment of knowledge level of lithium therapy among caregivers of mentally ill patients. The reliability of the tool was 0.7, using split half method. The data collection period was from December 19th 2016 to January 22nd 2017. Ethical clearance was obtained from the institutional Ethical Committee and written permission was obtained from the HOD of psychiatric department. Before taking interview with the subjects, the researcher obtained an informed consent from the participants after clearly explaining the purpose of the study. Pearson chi square was used to analyze the association between the knowledge level and selected demographic.

Results

Section 1 Sample Characteristics.

Table 1: Distribution of subjects based on socio demographic characteristics

variables.

Serial no	Demographic Variables	Frequency (f)	Percentage (%)
1	Age in years		
	18-25 years	3	5
	26-35years	6	10
	36-45years	9	15
	45-64years	39	65
	>65years	3	5
2	Gender		

Cont... Table 1: Distribution of subjects based on socio demographic characteristics n=60

	Male	22	37
	Female	38	63
3	Education		
	Primary	24	40
	Higher secondary	21	35
	Graduate	11	19
	Postgraduate	2	3
	Professional	2	3
4	Socio economic status		
	Low	5	8
	Middle	55	92
5	Relationship with patient		
	Parents	35	58
	Wife/Husband	12	20
	Sibling	7	12
	Other	6	10
6	Length of stay with patient		
	<1year	1	2
	1-2years	3	5
	2-5years	0	0
	>5years	56	93
7	Duration of lithium therapy		
	<1year	9	15
	1-2years	14	23
	2-5years	19	32
	>5years	18	30

Table 1 depicts that 65% of the subjects were between the age group of 45-64 years and 63% were females. Majority of them were having primary education (40%). Most of them belongs to middle class family (92%). Majority of the care givers were their parents (58%) and length of stay with patient was >

5 years (93%). Only 15% of patients were receiving lithium therapy for less than one year .Around93% were staying with the patient for >5years .Around 30% of patients with mental illness were receiving lithium for more than 5 years

SECTION: 2 KNOWLEDGE OF CAREGIVERS OF MENTALLY ILL REGARDING LITHIUM THERAPY

n=60

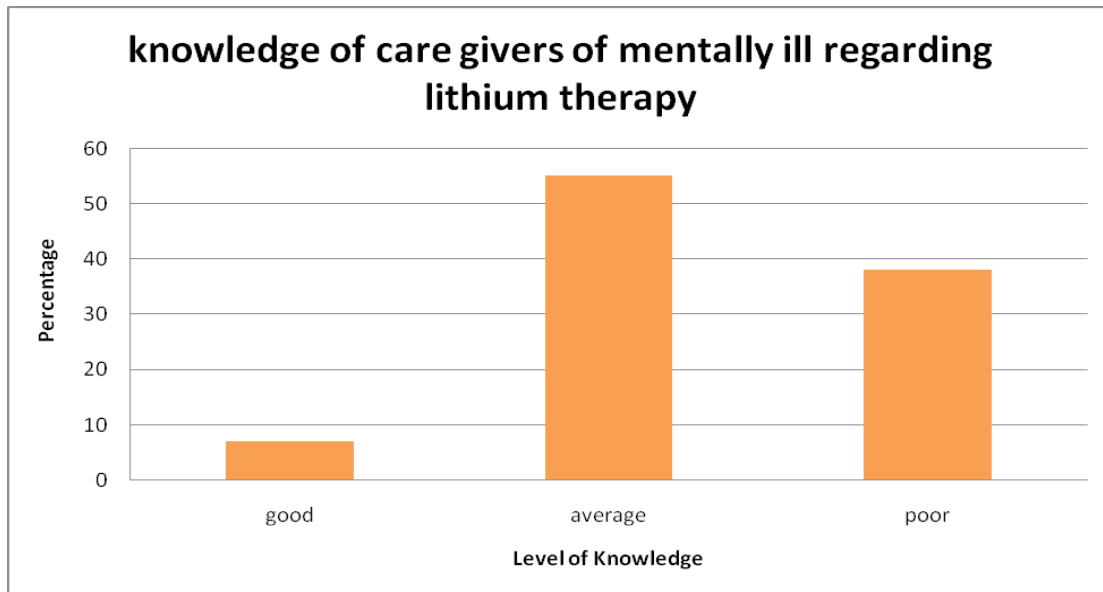


Figure 1 : Distribution of subjects based on knowledge regarding lithium therapy

The figure 1 shows that 38% of the subjects were having poor knowledge, and 55% were having average knowledge and only 7% were having good knowledge regarding lithium therapy.

DISTRIBUTION OF KNOWLEDGE BASED ON THE COMPONENTS

n=60

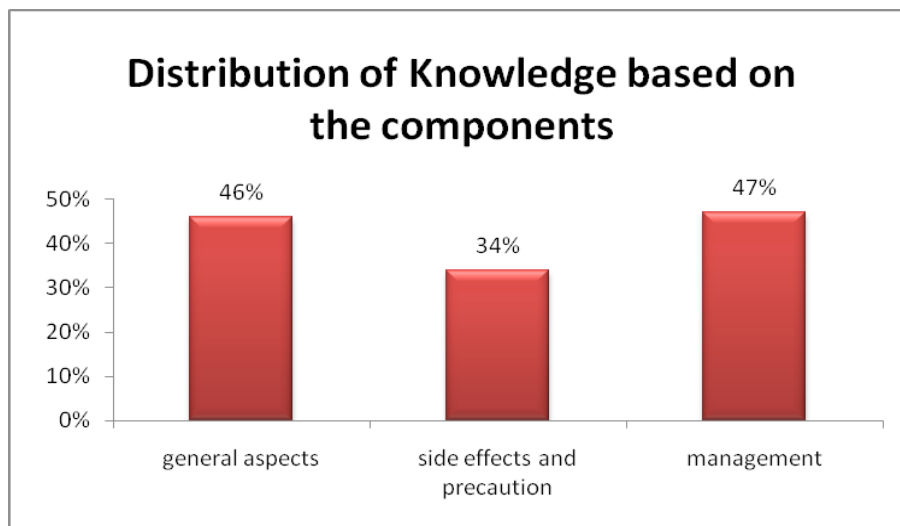


Figure 2: Distribution of knowledge based on the components

The above figure depicts the mean score percentage of the three components of the knowledge on lithium therapy. Of the three components of knowledge on lithium therapy, the mean score percentage was relatively high in the knowledge on general aspects of lithium

therapy (46%) and management of lithium toxicity (47%). The knowledge on side effects and precaution on lithium therapy was the low scored component with a mean score of 34% .

SECTION 4: ASSOCIATION BETWEEN LEVEL OF KNOWLEDGE AND SELECTED DEMOGRAPHIC VARIABLES

Table 2: Association between level of knowledge and selected demographic variables

n=60

Serial no	Demographic variables	Knowledge regarding lithium therapy			X ²	df	P value
		Poor <12	Average 12-18	Good >19			
1	Sex Male Female	14	7	1	9.430**	2	0.007
		9	26	3			
2	Education primary higher secondary & above	21	23	2	5.241*	2	0.023
		2	10	2			
3	Socio economic status low middle	5	0	0	8.775**	2	0.007
		18	33	4			

The table 2 shows that there was a significant association between caregivers sex ($X^2=9.43, p=0.007$) education ($X^2=5.241, p=0.02$) and socio economic status ($X^2=8.775, p=0.007$) with knowledge regarding lithium therapy and there is no association between other demographic variables ($p>0.05$).

Discussion

The lithium toxicity and other side effects are very common among patients who are receiving lithium carbonate, because of the lack of knowledge of caregivers regarding the care of patient receiving lithium carbonate. The result showed that among the care givers 55% having average knowledge, 38% having poor knowledge and only 7% had good knowledge regarding lithium therapy. The researcher couldn't trace any studies regarding the knowledge level of care givers and most of the studies were done among patients. Walter Enudi, Brian Lawler and Henry

P.O'Connel¹³ was conducted a study to examine the elderly patients knowledge about lithium therapy in an old age Psychiatry Department, Ireland. The finding of the study showed that elderly patients have poor knowledge regarding lithium therapy and there was no significant relation between knowledge level and patient characteristics (age, education, diagnosis and duration of lithium therapy). Another survey of 50 Chinese patients on maintenance lithium therapy revealed that their medical knowledge about lithium treatment, as measured by a "Lithium

Questionnaire," was very limited.¹⁴ In this study, results showed a significant association between caregivers sex, education and socio economic status with knowledge regarding lithium therapy. A similar study conducted by Walter Enudi, Brian Lawler and Henry P.O'Connel¹³ among the elderly patients in an old age Psychiatry Department in Ireland showed there was no significant relation between knowledge level and patient characteristics (age, education, diagnosis and duration of lithium therapy). The present study was conducted among care givers, may be due to that the association with some of the demographic variables were found. Family influence the patients' medication adherence in several ways¹⁴. After this study the researchers provided a booklet on lithium therapy to the caregivers for improving their knowledge regarding lithium therapy. This study results highlights the need for educating the patients on lithium therapy prior to commencement of treatment.

Conflict of Interest: Nil

Compliance with ethical standard: This study was initiated after obtain permission from the Institution.

Source of Funding: Nil

Informed Consent: Informed consent was obtained from all individual participants included in this study.

Conclusion

Lithium remains a fundamental tool for the treatment of bipolar disorders and it has been used over 50 years. Knowledge about a drug and its effects may play an important role in establishing compliance. This study results highlight the need for patients to be given comprehensive information about lithium prior to commencement of treatment and a refresher educational program during lithium therapy.

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