

Study Of Impact Of Patient Education On Improving Patient Compliance To Treatment With Antidepressants In The Psychiatric Service In A Tertiary Care Hospital

N.Sai Supra Siddhu^{1*}, Dr.R,Gandhi Babu²,Hana Nazim¹,
Eldho Baby¹, Dr.G.Gopalakrishnan¹.

¹(Department of pharmacy, Annamalai university, Tamilnadu, India)

²(Department of Psychiatry at Rajah Muthiah Medical College & Hospital, Annamalai University, Tamilnadu India.)

Corresponding Author: N.Sai Supra Siddhu

Abstract : The WHO defines depression as a pessimistic sense of inadequacy and a despondent lack of activity. Antidepressants are a class of drugs that reduce symptoms of depressive disorders by correcting chemical imbalances of neurotransmitters in the brain. Based on this a prospective observational study was performed in Department of Psychiatry, RMMCH, Annamalai University, TamilNadu, for a period of study 6 months; Between November 2015 and April 2016. Totally 82 patients who satisfied the inclusion and exclusion criteria were enrolled. The objectives were to observe the prescription for ADRs with the use of antidepressants and educate the patient and assess the impact of education on compliance. Our study showed that incidence of ADRs with antidepressants were 24.4% and higher prevalence of ADR in polytherapy to monotherapy. There was higher incidence of ADR with the use of amitriptyline (40%). The outcome of medication adherence was measured using MMAS-4 and statistical analysis showed significant difference between the control and test groups. Similarly the outcome of patient education was assessed using HDRS score and analysis showed that test group had statistically significant difference with p value less than 0.001 whereas the control group had no statistically significant difference with p value 0.067 which indicated that the test group had significant improvement in symptoms in comparison to the control.

Keywords: Adverse drug reactions Antidepressants, Compliance, Medication Adherence, Patient education.

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I. Introduction

Treatment non-adherence remains one of the greatest challenges in psychiatry⁽¹⁾. Poor adherence has a profound impact on the disease course, relapse, future recovery, cost of health care, and the outcome for the patients. Estimates from the World Health organization indicate that only about 50% of patients with chronic diseases living in developed countries follow recommended treatment⁽²⁾. In psychiatry, poor medication adherence rates reported for patients with for depression ranged between 10% and 60%.⁽³⁾ Another study showed had found that 88% of the patients on antidepressant missed the medication within 25% of days of 3 months period in an Indian setting⁽⁴⁾. Adverse drug reactions have impact on compliance to medications. Treatment adherence can be improved with various measures. The pharmacists play a major role in improving compliance to treatment. Many studies have been done to determine whether pharmacist interventions can lead to improved adherence and treatment outcomes. In a large meta-analysis conducted to determine medication adherence (along with several other outcomes), pharmacist interventions were found to improve medication adherence⁽⁵⁾. The objective of our study was to observe the prescription for Adverse drug reactions and to also synthesize evidence regarding the efficacy and effectiveness of clinical pharmacist interventions to improve patient compliance to treatment.

II. Materials And Methods

The study is conducted in The Department of Psychiatry, Rajah Muthiah Medical College Hospital, Annamalai University, Annamalai Nagar, Tamil Nadu, which is a 1400 bedded multi-specialty tertiary care teaching hospital located in rural South India from the period of November 2015 to April 2016. Required data collected from patient case sheet and recorded in specially designed proforma. Ethically approved.

Inclusion criteria:

- * Depression
- * With comorbidities
- * All cases during a particular period

Exclusion criteria:

- * Children of age 13 and below.
- * Medically ill people.
- * Patients who are not willing to participate

III. Results

A total number of 85 patients were enrolled in or study. Out of all the patients enrolled 82 of them completed the study. The upcoming results were from the ones who completed the study successfully.

Table 14: Observed Adverse Drug Reactions

TYPES OF ADR	NUMBER OF ADVERSE EVENTS	PERCENTAGE
SEDATION	5	25
WEIGHT GAIN	3	15
URINE DISCOLORATION	4	20
CONSTIPATION	1	5
ORTHOSTATIC HYPOTENSION	4	20
SUICIDAL IDEATION	2	10
HEPATIC IMPAIRMENT	1	5
TOTAL	20	100

Fig 1.1 Observed Adverse Drug Reactions

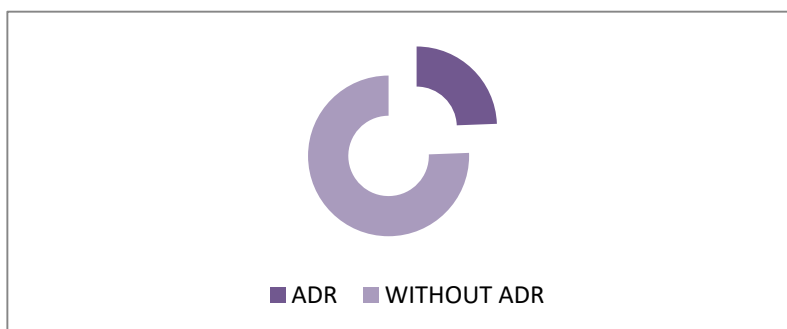


Fig 1.2: Observed Adverse Drug Reactions

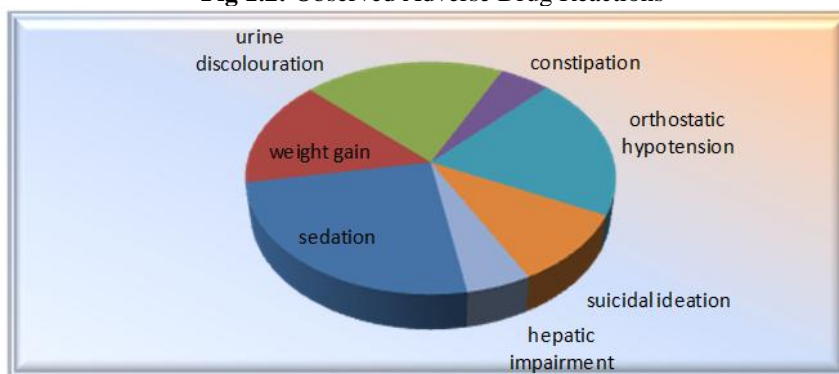


Table 2: Number Of Adverse Events With Respect To Drugs Prescribed

DRUGS	TYPE OF ADVRSE EVENT	NUMBER OF EVENTS	TOTAL NUMBER OF EVENTS (%)
BUPROPION	WEIGHT GAIN	1	3(15)
	SEDATION	1	
	CONSTIPATION	1	
ESCITALOPRAM	SEDATION	1	3(15)
	WEIGHT GAIN	1	
	SUICIDAL IDEATION	1	

CITALOPRAM	SEDATION	1	2(10)
	ORTHOSTATIC HYPOTENSION	1	
AMITRIPTYLINE	SEDATION	1	8(40)
	ORTHOSTATIC HYPOTENSION	2	
	DISCOLOURATION OF URINE	4	
	HEPATIC IMPAIRMENT	1	
MIRTAZAPINE	SEDATION	1	2(10)
	SUICIDAL IDEATION	1	
SERTRALINE	ORTHOSTATIC HYPOTENSION	1	2(10)
	WEIGHT GAIN	1	
TOTAL			20

Fig 2: Number Of Adverse Events With Respect To Drugs Prescribed.

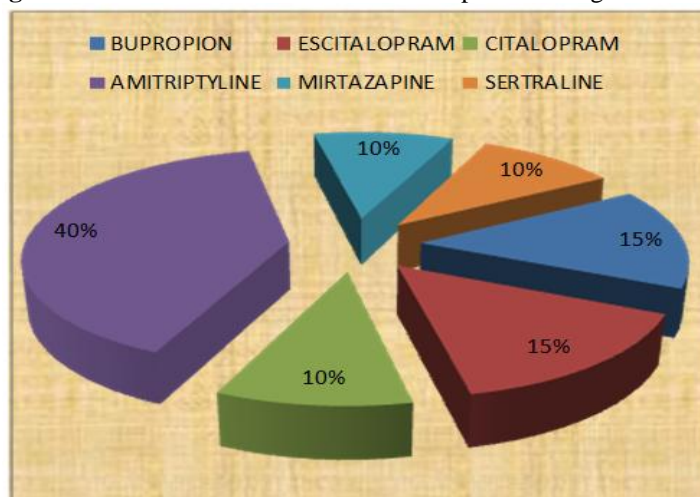


TABLE 3: Comparision Of Adverse Events In Various Therapy Regimens

TYPE OF THERAPY	NUMBER OF PATIENT (%)	ADVESE EVENTS (%)	RATIO OF ADVERSE EVENTS (%)
MONOTHREAPY	70(85.4)	12(60)	17.1(20.4)
POLYTHERAPY	12(14.6)	8(40)	66.6(79.6)
TOTAL	82(100)	20(100)	83.7(100)

Fig 3: Comparison Of Adverse Events In Various Therapy Regimens

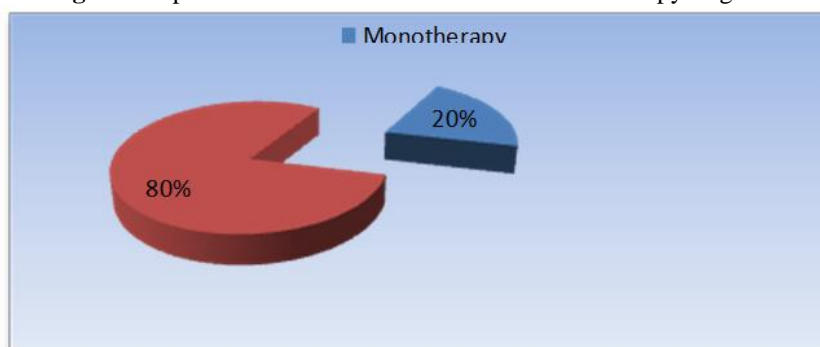


Table 4: Outcome of The Medication Adherence (N=41)

Mann Whitney Rank Sum Test

GROUP	NUMBER OF PATIENTS	MEDIAN	25%	75%	SIGNIFICANCE	
Control	DAY 1	41	3	2	4	0.521
	DAY 45	41	3	2	3.25	
Test	DAY 1	41	3.00	1.00	4.00	<0.001
	DAY 45	41	0	0	1.250	

Table 15: Outcome of Patient Counselling (N=41)

Mann Whitney Rank Sum Test

GROUP	NUMBER OF PATIENTS	MEDIAN	25%	75%	SIGNIFICANCE	
Control	1 ST DAY	41	17	14.75	21	0.067
	45 TH DAY	41	15	13	21	
Test	1 ST DAY	41	15	13	17	<0.001
	45 TH DAY	41	11	10	14.25	

IV. Conclusion

A total number of 85 patients were enrolled in or study. Out of all the patients enrolled 82 of them completed the study. Our study aimed to observe the adverse drug reactions in the prescription and to study the outcome of patient education on compliance

Adverse drug reaction reporting:

The incidence of ADRs of antidepressants was 24.4% in the study population. In our study there is higher prevalence of ADR in polytherapy (79.6%) in comparison to monotherapy (20.6%). Even though amitriptyline has higher incidence of ADR (40%), it is one of the most frequently prescribed drug in our hospital. This is because our study was undertaken at a tertiary care teaching hospital where most of the patients seeking treatment are from poor socioeconomic class. So they are prescribed medications available at hospital pharmacy which they can avail free of cost. Hence prescribing depends on the drugs available at hospital pharmacy. Amitriptyline being cheaper compared to other SSRIs and is supplied by hospital pharmacy free of cost.

Outcome of patient counseling:

The outcome of patient counseling was assessed using HDRS score by categorizing 41 patients each into Control and test group respectively. Analysis done using Mann Whitney Rank Sum test showed that the test group had statistically significant difference with p value less than 0.001 whereas the control group had no statistically significant difference with p value 0.067. This indicated that the test group had significant improvement in symptoms in comparison to the test group.

Outcome of medication adherence:

The outcome of patient counseling was assessed using HDRS score by categorizing 41 patients each into Control and test group respectively. Analysis done using Mann Whitney Rank Sum test showed that the test group had statistically significant difference with p value less than 0.001 whereas the control group had no statistically significant difference with p value 0.521. This indicated that the test group had significant improvement in symptoms in comparison to the test group.

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