Original Research Article

Pattern of antidepressant prescription at tertiary (mental hospital vs medical college) care centre of central India

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ABSTRACT

Background: Western literature full of extensively study the antidepressant prescription pattern at different settings. Recently in Indian context multicentre study and individual centers reported pattern of antidepressant uses for management of depression. With the time newer antidepressant approved, with better understanding of evidence based pathogenesis of illness influence the treatment patterns. Mental hospital setting is different that medical college setting at least for stigma related issue. The aim of the research work was to study the pattern of antidepressant prescription at mental hospital and medical college settings.

Methods: Cross-sectional assessments were done at mental hospital and medical college centers. Subjects diagnosed as depressive episode as per ICD 10, age >18 year included in study. Total 105 treatment seeking subject included in study from both centers Data was collected on socio-demographic characteristics, Clinical profile and prescribed medication.

Results: 49 subjects from mental hospital, 56 subjects from medical college included in study. Mean age of study sample 39.27±12.96 vs 37.49±14.90 years respectively at mental hospital and medical college centers. Escitalopram prescribed 83.7% subjects, 53.3 % subjects receive monotherapy. L methyl folate and atypical antipsychotics was most commonly adjunctive medication with antidepressants.

Conclusions: In sociodemographic differences subjects attending mental hospital belong to lower socioeconomic status compare to subject attending mental hospitals. There were no significant differences in prescription pattern of antidepressant medication for treatment of depressive episode. Escitalopram most commonly prescribed antidepressant and L methyl folate and atypical antipsychotics was most commonly used adjuvant with antidepressant medications.

Keywords: Antidepressant use pattern, Depression, Escitalopram, Mirtazepine, SSRI, SNRI

INTRODUCTION

In recent years mental health initiative by states and groups raised the awareness about mental illness and diminished stigma attached to mental illness. In India especially, central India still tertiary care centre are the major mental health providers. In country mental hospitals and medical college are tertiary care centers for mental health services. Among mental illness depressive

disorder will be the leading cause of disease burden worldwide up to 2030 estimated World health organization.[1] An episode of depression leads to increased risk of absenteeism from work, decreased productivity and the treatment related costs.[2] Depression is a common and treatable condition and antidepressants are most common prescribed psychotropic medication. Most of antidepressants are directly or indirectly raised mono-ammines level at synapse. Despite the considerable

development of antidepressants, recent studies suggested that many patients do not achieve a satisfactory outcome, and no single treatment strategy seems to be a panacea in the treatment of depressive disorders.[3] Previous literature shows the remission rate by single antidepressant is still very low.[4] Increasing numbers and types of antidepressant and dimensional approach of depression show that different symptom of depression mediated by different neurotransmitter.

To enhance remission rates in depression the clinician use antidepressants according to symptoms and patient characteristics in clinical practice provided better prescription based on patient's profile and clinical symptoms which is different from prescribed guideline. Other than this at mental hospital settings and medical college setting patient profile different due to stigma attached to psychiatric hospitals.

So, this study addresses the question to antidepressant prescription pattern at two different tertiary care centre in central India.

METHODS

Data for this study was collected from 2 study centers of Indore. A unified research protocol was framed and Institutional Ethics committees at both participating centers approved the study. Experienced consultant psychiatrists supervised data collection both each center.

Study design and sample

This cross-sectional observational study was conducted from 1 August 2016 to 1 September 2016. Treatment-seeking subjects aged >/=18 years attending at study centre and diagnosed as depressive episode and prescribed antidepressant were recruited, from outpatient department for this study. Assessments were carried out by face-to-face interviews conducted by consultant psychiatrist. Subjects were excluded if they had a history of psychosis or bipolar disorder, intellectual disability, Autism spectrum disorder and dementia or organic brain syndrome.

Tools

Data was collected on a specifically designed proforma to record sociodemographic and clinical details such as past history, family history, history of substance abuse, duration of illness.

Statistical analysis

Means with standard deviations and frequencies with percentages were used to summarize continuous and categorical variables, respectively. Student's t-test (continuous variables) and chi-squared test (categorical variables) were used for comparative analyses between the genders. Statistical significance was fixed at $p=0.05$.

RESULTS

Table 1: Demographic characteristics by type of patient setting (n=105).

Characteristic	Mental hospital (n=49)	Medical college (n=56)	Total (n=105)	P-value
Age, years (mean ± SD)	39.27 ± 12.96	37.49 ± 14.90	38 ± 13.65	N.s.
Sex				
Male (%)	26 (53.1)	22 (39.3)	48 (46.2)	N.s.
Female (%)	23(46.9)	33 (58.9)	56 (53.8)	
Marital status				
Married (%)	32 (65.3)	30 (53.4)	62 (59.6)	
Single (%)	13 (26.5)	19 (33.9)	32 (30.8)	N.s.
Divorced (%)	3 (6.1)	5 (8.9)	8 (7.7)	
Widowed (%)	1 (2.0)	2 (3.6)	3 (2.9)	
Educational level				
Illiterate (%)	20 (0)	0 (0)	20 (19.2)	
Primary (%)	20 (40.8)	3 (6.1)	23 (22.1)	N.s.
High school (%)	7 (14.2)	28 (50.0)	35 (33.6)	
University/others (%)	2 (4.1)	24 (42.8)	26 (25.0)	
Work type				
Unemployed (%)	15 (30.6)	3 (5.4)	18 (17.1)	
Unskilled (%)	19 (38.7)	19 (33.9)	38 (36.2)	N.s.
Semiskilled (%)	2 (4.1)	0 (0)	2 (1.9)	
Skilled (%)	13 (26.5)	34 (60.7)	46 (43.8)	
Past history of psychiatric illness				
Absent (%)	46 (93.9)	47 (83.9)	93 (88.6)	N.s.
Present (%)	3 (6.1)	9 (16.1)	12 (11.4)	
Family history of psychiatric illness				
Absent (%)	43 (87.8)	46 (82.1)	89 (84.8)	N.s.
Present (%)	6 (12.2)	9 (16.1)	15 (14.2)	
History of substance abuse				
Absent (%)	39 (79.6)	47 (83.9)	86 (81.9)	N.s.
Present (%)	10 (20.4)	9 (16.1)	19 (18.1)	
Duration of illness in month (mean ± SD)	36.17 ± 52.6	26.68 ± 27.33	32.36 ± 34.45	N.s.

Data collected from 2 tertiary care centre for one month and 105 depressive episodes was recruited for and included in study. Both centre government run institute. Study sample constitute 46.2% male and mean age of study sample 38±13.65 years.

Analyses in the present study focused on studying tertiary care centre differences in depressive episode sociodemographic and antidepressant prescription pattern.

Sociodemographic profile

Table 1 show the sociodemographic profile of study sample. Mean age of study sample 39.27 ± 12.96 versus 37.49 ± 14.90 years which was higher for mental hospital

centers. Study sample of mental hospital centers was illiterate and unskilled or unemployed in comparison to medical college centers. Mean duration of illness was higher for mental hospital centers.

Antidepressant prescription pattern

Table 2 shows mental hospital vs medical college centers 65.3% vs 42.8% was on monotherapy respectively. SSRI was most commonly prescribed antidepressant especially Escitalopram as monotherapy and combination therapy both. L-methyl folate and antipsychotics was most commonly used augmenting agents.

Mirtazepine was most commonly prescribed add on antidepressants in study sample at both centers.

Table 2: Current uses of antidepressant medications by type of patient setting (N=105).

Classes of antidepressants used	Current		Total (n=105)	P-value
	Mental hospital (n=49)	Medical college (n=56)		
Monotherapies	32	24	56	N.s.
SSRI antidepressants	28	22	48	N.s.
Mirtazapine	4	2	8	N.s.
Combination therapy	28	20	48	N.s.
SSRI + TCA	3	2	5	N.s.
SSRI + BZP	2	3	5	N.s.
SSRI+ antipsychotics (olanzapine, Aripiprazol, quitapine)	9	5	14	N.s.
SSRI + l-methyl folate	4	4	8	N.s.
SSRI + mood stabilizer	1	1	2	N.s.
SSRI + propenalol	1	0	1	N.s.
SNRI + amitryptyline	4	2	6	N.s.
SNRI + l-methyl folate	1	3	4	N.s.
Mirtazepine + aripiprazole	1	0	1	N.s.
SSRI + quitapine + clonazepam	2	0	2	N.s.

Other augmenting agents in combination therapy were tricyclic antidepressant, Beta blocker, Benzodiazepines and mood stabilizers. Among antipsychotics most commonly Olanzapine was used followed by Aripiprazole and Quitapine was used.

DISCUSSION

Western literature full of antidepressant pattern of uses at national patterns, prescription patterns in general practice and specialist centers, outpatients and inpatients.[5-7] In Indian studies also evaluated antidepressant prescription from multicentre study and single center.[8-10] To the best of our knowledge, this is the first study from central India to evaluate the antidepressant prescription pattern at Mental hospital and medical college centers.

This study results shows that Escitalopram is the most commonly prescribed antidepressant at both centers (Mental hospital and Medical College) of central India and SSRIs are the most commonly prescribed class of antidepressants. Overall nearly 83.7% of the patients received one or another SSRI. When we compare these findings with the previous studies, the recent study from Indian psychiatry society also reported a similar picture.[10] However, the findings are contrary to the other studies from India in which one reported Duloxetine and other reported Imipramine to be the most commonly prescribed antidepressant.[8,9]

The difference between the findings of the present study and previous study suggests that prescription pattern of a specific center often does note remain same with the time

never evidences and newer antidepressant significantly impact over prescription pattern. Earlier study also supports this changing pattern of antidepressant prescription patterns with time.[8] The finding of this study also similar with finding of other study from the West and multi-country study from East Asia.[5,11,12]

However, the percentage of prescription of SSRIs in the present study is higher than that reported in these studies. In the present study Mirtazepine formed the 8% of the total antidepressant prescriptions. In the present study 53.3% of the patients were on monotherapy. This is less than that reported by Trivedi et al., Grover et al.[9,10]

Current treatment guidelines mostly recommend use of SSRIs as the first line agents in patients of depression.[13] Treatment guidelines discourage concomitant use of two antidepressants.[13] In this study at both centers most of the patients in the present study were prescribed antidepressants according to the recommendations of the treatment guidelines.

L methyl folate and atypical antipsychotic emerged as the most commonly prescribed adjuvant psychotropic medications and was prescribed to nearly one third of the participants. This finding contradictory to previous study in which Clonazepam has been reported in earlier studies from India.[9,10]

In recent years lone term adverse effect of benzodiazepine e.g. cognitive slowing, dependence warrant the non-judicious use of benzodiazepine on other side folate use as augmenting agents with no adverse effect, increase the uses in the management of depression. This is significant change in prescription pattern of depressive episode management.

CONCLUSION

To conclude, present study suggests that Escitalopram is the most commonly prescribed antidepressant and SSRIs are the most commonly prescribed class of antidepressants. Poly pharmacy in the form of concomitant use of two antidepressants is practiced infrequently. However, L-methyl folate and atypical antipsychotics are used as the co-prescription.

Limited sample size was major limitation of this study. Along with in this study co morbidity, severity of depressive episode, previous responsiveness of antidepressant was not included, nor study sample represent adolescent and elderly population. So, the result should be interpreted in the light of limitations and future studies should evaluate larger sample of patients and should include patients of depression of all age groups, with all kind of co morbidities.

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