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Research Article

PATTERNS OF PRESCRIBING MEDICATIONS IN GERIATRIC PSYCHATRIC PATIENTS: A HOSPITAL BASED CROSS SECTIONAL STUDY

Dr. Naga Subrahmanyam. S*[1], G.Gayathri [1], D. Naomi Blessy[1], Dr.I.Sarath Chandra[2], Dr. Srujana[3]

[1,3]Hindu college of Pharmacy, Department of Pharmacy Practice
[2]Department of Psychiatry, Manasa hospital, kothapeta, Guntur

ARTICLE INFO

ABSTRACT

Aims & Objective: To assess the patterns of prescribing medication in geriatric psychiatric patients: A hospital based cross sectional study.

Methodilogy: This study was conducted in the outpatient department of Manasa Hospital, Guntur, Andhra Pradesh, India, for a period of 6 months. All the patients were systematically interviewed and their socio demographic details were noted. The diagnosis of these patients was made according to ICD-10 RDC Guidelines by consultant psychiatrist at the hospital. Totally, 130 patients in the geriatric age group from the outpatient departments of Manasa Hospital, Guntur were included in the study. The data were collected using predesigned proforma specially designed for this purpose. Patient's prescription sheet was evaluated and age and gender wise distribution of patients, diseases suffered and co-morbid conditions were examined. Analysis was carried out for total number of drugs prescribed, average number of drugs per prescription. Analysis was carried out by using Microsoft Excel. The results and conclusions will be made by using SPSS 16.

Results: In a geriatric psychiatric population the prevalence of diseases are 40% were with GAD, 30% with Depression, 23.07% with Schizophrenia, 2.3% with ADS and OCD. In this study out of 130 patients antidepressents class of drugs used in depression are 55.3% (n=130), GAD 43.07% (n=130), and in ADS 1.5%(n=130). Benzodiazepines class of drugs used in schizophrenia are 25.3%(n=130), depression are 30 %(n=130), GAD 40%(n=130) , in ADS 2.3%(n=130) and in OCD 2.3%(n=130). antipsychotics class of drugs used in schizophrenia are 43.8%(n=130), in depression are 15.3%(n=130), GAD 36.1%(n=130) , in ADS 2.3%(n=130) and in OCD 2.3%(n=130). Others class of drugs used in schizophrenia are 25.3%(n=130),in depression are 30%(n=130),GAD 40%(n=130),in ADS 2.3%(n=130) and in OCD 2.3%(n=130).

Conclusion: Our study concludes that prevalence of GAD is more in geriatrics with comparative depression, schizophrenia, ADS and OCD. In our study more antidepressants class of drugs were used in depression then GAD. In this class of drugs escitalopram were more used in depression and GAD. Next to escitalopram they used duloxetine for depression and amitriptyline for GAD. Another class of drugs were benzodiazepines more used in GAD, in this class of drugs clonazepam was more used for GAD then etizolam, clonazepam+lorazepam and lorazepam. One more class of drugs were antipsychotic more used for schizophrenia then GAD, depression, ADS and OCD, in this class of drugs olanzapine was more prescribed for schizophrenia than depression and GAD. Next to olanzapine we see quetipine. Other classes of drugs were also used in GAD than depression, schizophrenia and ADS, in these drugs, the mainly used were trihexaphenidyl then Pragavaline, Folic acid + methylcobalamine + alpha-lipolyic acid + vitamine b6, Pantaprozole, Rabiprozole, Diphenhyldramine, Trihexaphenidyl+pantaprozole, Trihexaphenidyl+ folic acid+ methylcobalamine+ alpha-lipolicacid + vitaminb6.

INTRODUCTION

Rational use of medicine is essential in elderly patients as it can improve the quality of life and prolong the life span. In 1985, World Health Organization (WHO) initiated the concept of rational use of medicine (RMU) to improve the use of medicines, especially in developing countries [1]. Subsequently, it formulated a set of indicators and appropriate methodology to evaluate the trends in prescribing, drug use patterns and dispensing behaviour in different healthcare setups. In spite of all, the inappropriate prescribing is widespread [2]. Prevalence of the drug use increased in elderly populations as incidence of multiple chronic diseases and degenerative conditions increases [3]. There is a tendency to prescribe heavily for older patients. Age related physiopathologic changes also alter pharmacokinetics and pharmacodynamics profiles of drug and make them more predisposed to adverse effects of drugs [4]. Thus, elderly people are susceptible to the danger of drug- related adverse effects along with drug-drug interactions, decreased dosing compliance because of poly-pharmacy which may render a

Corresponding author: **Dr. Naga Subrahmanyam. S**
Hindu college of Pharmacy, Department of Pharmacy Practice

sub-therapeutic effect, increased hospital stay and all these conditions leads to increased financial burdens [5]. The age distributions of populations have changed dramatically and changing continuously. According to United Nations Population Division, in less than four decades between 2012 and 2050,[6] the world population age 60 and older will more than double to 2.03 billion, and in India, the elderly population is expected to increase from 5% to 14%, while the population of 80 and older will be threefold and reach around 323 million[7]. Physicians need to understand aging biology along with WHO prescribing guidelines and how to use medicines rationally, in order to provide better health care facility to manage people who are elderly [8]. Therefore, the study was carried out to obtaining knowledge about the prescribing pattern in elderly in the southern part of Guntur using A semi structured interview contain Socio demographic variables, Pattern of drugs prescribed, Risk factor, The diagnosis was made according to ICD 10, R criteria, Cost of the medication, which is essential for providing optimal healthcare to this vulnerable population. So we included in the study of patients with five major psychiatric conditions. The data were collected using predesigned proforma specially designed for this purpose. Patient's prescription sheet was evaluated and age and gender wise distribution of patients, diseases suffered and co-morbid conditions were examined. Analysis was carried out for total number of drugs prescribed, average number of drugs per prescription, and cost of each prescription. Analysis was carried out by using Microsoft Excel.

Aims & objectives

Aims

- To study the prescribing pattern of thosepsychiatric disorder.
- To study the various psychiatric disorders ingeriatric patients.
- To provide a statistical data of psychiatricdisorders in geriatric population.

Objective

The objective of this study was to evaluatepsychiatric illness and patterns of psychotropic drug prescribing and utilization among elderly in atertiary care hospital.

METHODOLOGY

Study Place
Manasa Hospital, Kothapet, Guntur.
Study Design:
Cross Sectional Study
Duration of Study:
6 Months(January 2017-JUN3 2017)
Sources of Data:

All the relevant data are collected from:

1. Socio Demographic Variables
2. Patterns of Drug Prescribing
3. Chief Complaints
4. Risk Factors
5. Care Givers Details
6. Diagnosis Was Made According To Icd-10 Criteria

- This study was conducted in the outpatient department of Manasa Hospital, Guntur, Andhra Pradesh,India, for a period of 6 months.

- All the patients were systematically interviewed and their socio demographic details were noted.
- The diagnosis of these patients was made according to ICD-10 RDC Guidelines by consultant psychiatrist at the hospital.
- Totally, 130 patients in the geriatric age group from the outpatient departments of Manasa Hospital, Guntur were included in the study.
- The data were collected using predesigned proforma specially designed for this purpose. Patient's prescription sheet was evaluated and age and gender wise distribution of patients, diseases suffered and co-morbid conditions were examined. Analysis was carried out for total number of drugs prescribed, average number of drugs per prescription. Analysis was carried out by using Microsoft Excel.
- The results and conclusions will be made by using SPSS 16.

Study criteria

Inclusion criteria

- Age above 60yrs were included
- Availability of reliable informant
- Patient or attendant given informant

Exclusion criteria

- Those who are not willing to provide the information
- Below 60yrs patients were not included
- Inpatient were not included
- Patients with completely altered mental status were not considered

Tools

1. Socio demographic profile

The socio demographic and clinical profile sheet was administered on patients to record variables suchas age, sex, level of education, employment status, type of family, locality, reason.

2. Pattern of drugs prescribed.
3. The diagnosis was made according to ICD 10,R criteria.
4. Microsoft excel.
5. Spss 16 software.

Pattern of prescribing drugs in geriatric psychiatric population

Patient details:	OP no:
Name:	**Age:**
Sex: M / F	**DOA :**
Weight:	**Ph. No:**

Occupation:

Employed ☐   unemployed ☐
Education:

Literate: Primary ☐   Secondary ☐

Graduation ☐

Illiterate ☐

Primary care giver:

  Age:

  Sex: M /F

  Relation:

  Education: literate ☐   illiterate

  Employed ☐   unemployed ☐

Type of family:

        Nuclear ☐   Joint ☐

Economic Status:

  Poor ☐   Middleclass ☐   Rich ☐

Marital status:

Married ☐   Single ☐   Divorced ☐

        Separated ☐

History of substance abuse:

Smoking status: No ☐   Yes ☐

Alcoholic status: No ☐   Yes ☐

Others:

Vital signs

Date
Temp(°F)
BP(mmHg)
PR(bpm)
R. R
SP O_2

Reason for admission

Past history: B.P ☐   DM ☐   Respiratory ☐

 others:

Neurological:

Diagnosis

Treatment chart

T. Name	G. Name	Dose & frequency	Duration	Class of the drug	Cost

RESULTS

Table 1 Relationship between Diagnosis &Age

Diagnosis	Age			Total
	50-60	**61-70**	**71-80**	
Schizophrenia	7	19	7	33
Depression	9	23	7	39
GAD	14	29	9	52
ADS	0	3	0	3
OCD	0	0	3	3
Total	30	74	26	130

Chi Square Value-14.992; Significance-0.059

Table 2 Relation between Age and Smoking

	SMOKING		
AGE	**YES**	**NO**	**Total**
50-60	2	28	30
61-70	13	61	74
71-80	8	18	26
Total	23	107	130

Chi- Square Value: 5.558; Significance :0.062

Table 3 Relation between Age & Alocohol

	ALCOHOL		Total
AGE	**YES**	**NO**	
50-60	5	25	30
61-70	22	52	74
71-80	8	18	26
Total	35	95	130

Chi-Square Value: 2.096; Significance :0.351

Table 4 Relation between Diagnosis and Anti Depressents

Diagnosis	Antidepressants									
	0	**Escitalopram**	**Amitriptyline**	**Fluoxatine**	**Duloxetine**	**Mirtazapine**	**Clomiramine**	**Desvenlafaxine**	**Sertaline**	**TOTAL**
Schizophrenia	0	0	0	0	0	0	0	0	0	0
Depression	21	20	2	1	10	6	6	5	1	72
GAD	20	24	7	1	3	0	1	0	0	56
ADS	0	2	0	0	0	0	0	0	0	2
OCD	0	0	0	0	0	0	0	0	0	0
Total	41	46	9	2	13	6	7	5	1	130

Chi-Square Value: 37.516 a; Signafance :0..231

Table 5 Relationship between Diagnosis and Benzodiazepins

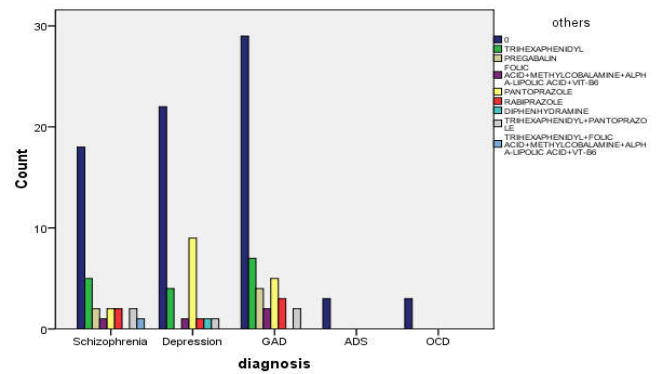| Diagnosis	Benzodiazepines						
	0	**Clonazepam**	**Lovazepam**	**Etizolam**	**Clonazepam+ Lovazepam**	**Clonazepam + Etizolam**	**Total**
Schizophrenia	9	17	2	5	0	0	33
Depression	14	16	3	2	2	2	39
GAD	13	29	2	5	3	0	52
ADS	0	3	0	0	0	0	3
OCD	1	2	0	0	0	0	3
Total	37	67	7	12	5	2	130

Chi-Square Valve: 14.714; Significance :0.793
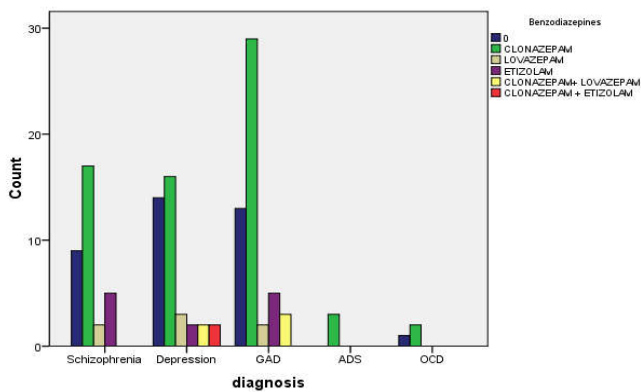
Chi-Square Value: 19.507 ; Significance : 0.959

Table 6 Relationship between Diagnosis & Antipsychotics

DIAGNOSIS	Antipsychotics										
	0	**OLANZE PINE**	**QUETI PINE**	**RISPERI DON**	**ARIPIPR AZOLE**	**HALOPERI DOL**	**OLANZEPIN E+ QUETIPINE+ RISPERIDON**	**OLANZEPI NE+ ARIPIPRA ZOLE**	**OLANZEPIN E+ QUETIPINE+ ARIPIPRAZ OLE**	**OLANZE PINE+ RISPERI DON**	**TOTAL**
Schizophrenia	18	10	9	6	3	0	8	1	0	2	57
Depression	9	4	0	0	2	2	0	2	1	0	20
GAD	33	2	3	4	0	0	0	2	0	3	47
ADS	3	0	0	0	0	0	0	0	0	0	3
OCD	2	0	0	0	0	0	1	0	0	0	3
Total	65	16	12	10	5	2	9	5	1	5	130

CHI-Square Value: 65.766; Significance: 0.002

Table 7 Relationship between Diagnosis and Other Medications:

DIAGNOSIS	Others									
	0	**TRIHEX APHENI DYL**	**PREGA BALIN**	**FOLIC ACID+ METHYLCOB ALAMINE+ ALPHA- LIPOLIC ACID+VIT-B6**	**PANTOP RAZOLE**	**RABIP RAZOL E**	**DIPHE NHYD RAMIN E**	**TRIHEXA PHENIDY L+ PANTOPR AZOLE**	**TRIHEXAPHEN IDYL+ FOLIC ACID+ METHYLCOBA LAMINE+ ALPHA- LIPOLIC ACID+VT-B6**	**Total**
Schizophrenia	18	5	2	1	2	2	0	2	1	33
Depression	22	4	0	1	9	1	1	1	0	39
GAD	29	7	4	2	5	3	0	2	0	52
ADS	3	0	0	0	0	0	0	0	0	3
OCD	3	0	0	0	0	0	0	0	0	3

DISCUSSION

- This study was an attempt to assess the patterns of prescribing medications in geriatric psychiatric consultation.
- The prevalence of schizophrenia at the age of 50-60years was 7 patients, 61-70 years was19 patients, 71-80 years was 7 patients .Depression at the age of 50-60 years was 9 patients , 61-70 years was 23 patients , 71-80 years was 7 patients. GAD at the age of 50-60 years was 14 patients, 61-70 years was 29 patients, 71-80 years was 9 patients. ADS at the age of 61-70 years was 3 patients. OCD at the age of 71-80 years was 3 patients.
- In a geriatric psychiatric population the prevalence of diseases are 40%were with GAD, 30%with Depression, 23.07% with Schizophrenia, 2.3% with ADS and OCD.
- Smoking was prevalent in 2 patients in 50-60 years, 13 in 61-70years, 8 in 71-80years.non smoking was found in 28 patients in 50-60yrs, 61 in 61-70yrs, 18 in 71-80yrs.
- Alcohol was prevalent in 5 patients in 50-60yrs ,22 patients in 61-70yrs, 8 patients in 71-80yrs.non smokers was found to be 25 patients in 50-60yrs,52 patients in 61-70yrs, 18 patients in 71-80yrs.
- In this study out of 130 patients antidepressents class of drugs used in depression are 55.3%(n=130), GAD 43.07%(n=130), and in ADS 1.5%(n=130). In the present study among all 130 patients Escitalopram was taken by 20 patients in depression, 24 patients in GAD, and 2 patients in ADS. Amitriptyline was taken by 2 patients in Depression, 7 patients in GAD. Fluoxatine was taken by 1 patient in depression, 1 patients in GAD.Duloxetine was taken by 10 patients in depression, 3 patients in GAD. Mirtazapine was taken by 6 patients in depression. Clomiramine was taken by 6 patients in depression, 1 patient in GAD. Desvenlafaxine was taken by 5 patients in depression. Sertraline was taken by 1 patients in depression
- In this study out of 130 patients benzodiazepines class of drugs used in schizophrenia are 25.3%(n=130), depression are 30 %(n=130) ,GAD 40%(n=130) , in ADS 2.3%(n=130) and in OCD 2.3%(n=130) .In the present study among all 130 patients In the present study among all 130 patients Clonazepam was taken by 17 patients in schizophrenia, 16 patients in depression, 29 patients in GAD, 3 patients in ADS, 2 patients in OCD. Lovazepam was taken by 2 patients in schizophrenia, 3 patients in depression, 2 patients in GAD. Etizolam was taken by 5 patients in schizophrenia, 2 patients in depression, 5 patients in GAD. Clonazepam+lovazepam was the combination drugs taken by 2 patients in depression, 3 patients in GAD. clonazepam+Etizolam was taken by 2 patients in depression.
- In this study out of 130 patients antipsychotics class of drugs used in schizophrenia are 43.8%(n=130), in depression are 15.3%(n=130), GAD 36.1%(n=130), in ADS 2.3%(n=130) and in OCD 2.3%(n=130). In the present study among all 130 patients Olanzapine was taken by 10 patients in schizophrenia, 4 patients in depression, 2 patients in GAD. Quetipine was taken by 9 patients in schizophrenia, 3 patients in GAD.

Risperidon was taken by 6 patient in schizophrenia, 4 patients in GAD. Aripiprazol was taken by 3 patients in schizophrenia, 2 patients in depression. Haloperidol was taken by 2 patients in depression. Olanzepine+Quetipine+Risperidon were the comibination of drugs taken by 8 patients in schizophrenia,1 patients in OCS.OLANZEPINE+ARIPIPRAZOLE was taken by 1 patients in schizophrenia, 2 patients in depression, 2 patients in GAD. OLANZEPINE+QUETIPINE+ARIPIPRAZOLE was taken by 1 patient depression. OLANZEPINE+RISPERIDON was taken by 2 patients in schizophrenia, 3 patients in GAD.
- In this study out of 130 patients others class of drugs used in schizophrenia are 25.3%(n=130), in depression are 30%(n=130), GAD 40%(n=130), in ADS 2.3%(n=130) and in OCD 2.3%(n=130). In the present study among all 130 patients Trihexaphenidyl was taken by 5 patients in schizophrenia, and 4 patients in depression and 7 patients in GAD. Pragavaline was taken by 2 patients in schizophrenia and 4 patients in GAD. Folic acid + methylcobalamine + alpha-lipolyic acid + vitamine b6 was taken by 1 patient in schizophrenia and 1 patient in depression. Pantaprozole was taken by 2 patients in schizophrenia and 9 patients depression, and 5 patients in GAD. Rabiprozole was taken by 2 patients in schizophrenia and 1 patient in depression and 3 patients in GAD. Diphenhyldramine was taken by 1 patient in depression. Trihexaphenidyl + pantaprozolewas taken by 2 patients in schizophrenia, 1 patient in depression and 2 patients in GAD. Trihexaphenidyl+ folic acid+ methylcobalamine+ alpha-lipolicacid + vitaminb6 was taken by 1 pateint in schizophrenia.

CONCLUSION

Our study concludes that prevalence of GAD is more in geriatrics with comparative depression, schizophrenia, ADS and OCD. In our study more antidepressants class of drugs were used in depression then GAD. In this class of drugs escitalopram were more used in depression and GAD. Next to escitalopram they used duloxetine for depression and amitriptyline for GAD. Another class of drugs were benzodiazepines more used in GAD, in this class of drugs clonazepam was more used for GAD then etizolam, clonazepam+lorazepam and lorazepam.one more class of drugs were antipsychotic more used for schizophrenia then GAD, depression, ADS and OCD, in this class of drugs olanzapine was more prescribed for schizophrenia than depression and GAD. Next to olanzapine we see quetipine. Other classes of drugs were also used in GAD than depression, schizophrenia and ADS, in these drugs, the mainly used were trihexaphenidyl then Pragavaline, Folic acid + methylcobalamine + alpha-lipolyic acid + vitamine b6, Pantaprozole,Rabiprozole,Diphenhyldramine,Trihexaphenidyl +pantaprozole, Trihexaphenidyl+ folic acid+ methylcobalamine+ alpha-lipolicacid + vitaminb6.

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http://apps.who.int/medicinedocs/pdf/s2289e/s2289e.pdf.

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