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A Prescription Audit of Drugs Prescribed in Psychiatry OPD in a Tertiary Care Teaching Hospital in North India

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Abstract
Background: *Although psychotropic medications play a significant role in modern day psychiatric practice, their utilization and consequences on actual clinical practice need continuous study.*
Methods: *Current prospective cross sectional drug utilization study was carried out in outpatient department of psychiatry, ESIC medical college and hospital, Faridabad, to assess the utilization of psychotropic drugs and their prescribing pattern. The prescribing pattern was analyzed by various WHO drug use indicators.*
Results: *Among 200 patients included in our study, 84 were males and 116 were females. The most common disorder was depression followed by anxiety, headache, psychosis and seizures. The number of drugs prescribed per patient was 1.9. 85% of drugs were prescribed by generic names, 89% drugs were available in hospital pharmacy. Escitalopram was the most common prescribed antidepressant (30%) and clonazepam was the most commonly prescribed benzodiazepine.*
Conclusion: *The study advocated on overall rational utilization of psychotropic drugs with a fewer deviation due to socio-economic status of patients and prescription patterns of health care providers.*
Keywords: *Prescription Audit, Drug Utilization, Psychotropic Drugs.*

Introduction

Psychopharmacology has become one of the most challenging fields in terms of both treatment of psychiatric disorders and research. Since new and improved drugs are being propagated, psychiatrics are facing dilemma as to what is safe and efficacious. Although psychotropic medications have had a remarkable impact on psychiatric practice their utilization and consequences on real life effectiveness in actual clinical practice need continuous study.(1)

Drug utilization research has generated increased interest stemming from virtual explosion in marketing of new drugs, wide variations in

patterns of drug prescribing and consumption and increasing concern about cost of drugs.[2] The basic premise of DUR is to facilitate the rational use of drugs. Without the knowledge of how drugs are to be prescribed it is difficult to suggest the measures to improve the prescribing habits[3]. There is insufficient data available on the use of psychotropic drugs in insured persons attending psychiatric OPD of ESIC hospitals. The present study was designed to observe the prevalence of different psychiatric illnesses and to analyze drug utilization pattern in outdoor patients of psychiatry department of ESIC Medical College and Hospital, Faridabad.

Methods

A cross sectional prospective drug utilization study of 3 months duration was carried out among outdoor patients of psychiatry OPD of ESIC medical college and hospital, Faridabad after approval from institutional ethics committee. Patients of all age groups and either sex who were attending psychiatry OPD were included in the study. Informed consent was obtained from patients or legal guardian. Patient related information and drug related information (drug, dose, dosage form, route of administration, frequency) were recorded in customized data sheet. A total of 200 prescriptions were analyzed. The WHO indicators selected to analyze the prescribing patterns included most common psychiatric disease, most commonly prescribed group of drug, most commonly prescribed drugs, number of drugs per prescription, percentage of drugs prescribed by generic name, percentage of drugs from essential drug list, percentage of fixed dose combination and frequency of psychotropic drug usage per indication.

Results

Characteristics Of Study Participants

A total of 200 patients coming to psychiatry OPD were included in our Study. The morbidity pattern of drugs according to gender and age characteristics are represented in Table 1. Among 200 patients, 84 patients were male as compared to female patients who were 116 in number. Overall maximum patients belonged to age group of 21-40 years (128). The remaining patients belonged to <20,41-60 and > 60 years respectively.

Drug Pattern of psychiatric disorders

72% of drugs prescribed were antidepressants, 52% were Benzodiazepines, 20% were beta blockers, 20% were NSAIDs. Rest of the drug classes were antipsychotics, anticonvulsants, anticholinergics and opioids. (Table 2)

Analysis of prescription pattern according to various WHO drug use indicators (Table 3)

The total number of different drug products prescribed were 380 in 200 encounters surveyed. The average number of drugs per encounter were 1.9 in our study. 85% of drugs prescribed were by generic name.89% of drugs prescribed were available in hospital pharmacy.

Table 1: Morbidity pattern of illness observed in Psychiatry OPD

Disease Class	Age (years)				Gender	
	<20	21-40	41-60	>60	M	F
Depression(n=56)	16	28	12	0	20	36
Schizophrenia (n=8)	0	8	0	0	6	2
Anxiety disorders (n=26)	2	10	12	2	14	12
Seizure(n=18)	4	14	0	0	6	12
Dissociative Conversion Disorder(n=14)	2	12	0	0	4	10
Premature Ejaculation(n=16)	0	10	6	0	16	0
Tension Type Headache(n=26)	2	16	8	0	6	20
Migraine(n=22)	4	16	2	0	10	12
Obsessive Compulsive Disorder(n=14)	0	14	0	0	2	12
Total=200						

Table 2: Assessment of prescription pattern as per various drug use indicators.

Average number of drugs per prescription	1.9
Average number of psychotropic drugs per prescription	2.01
Percentage of drugs prescribed by generic name	85%
Prescription comprising of injectable preparations	0
Percentage of the drugs supplied from hospital pharmacy	89%

Table 3: Drug Utilization of major Drug Classes

Drug Class	No of Drugs (%)
Antidepressants	144(72)
Benzodiazepines	104(52)
Antipsychotics	22(11)
Anticonvulsants	18(9)
Beta blockers	40(20)
NSAIDs	40(20)
Anticholinergics	8(4)
Opioids	4(2)

Figure 1: Drugs prescribed in Depression

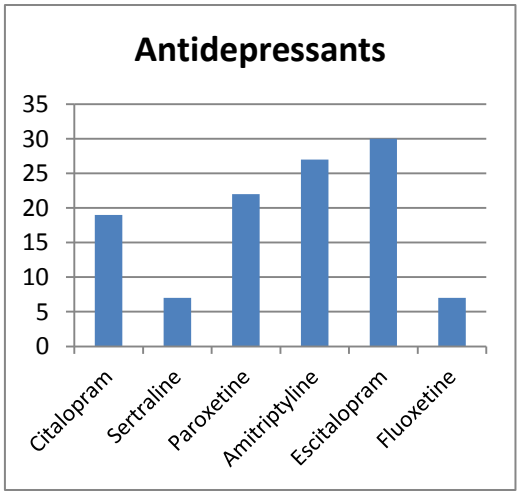


Figure 2: Pattern of Drugs in Schizophrenia

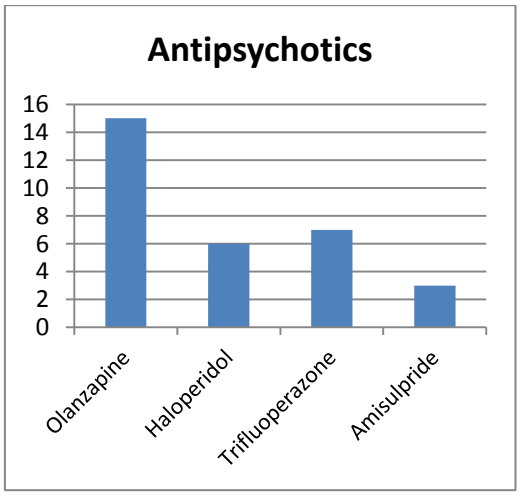


Figure 3 Pattern of Drugs in Anxiety

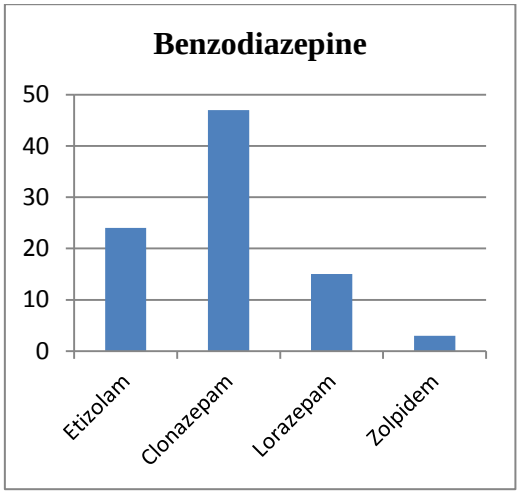


Figure 4: Pattern of Drugs in Headache

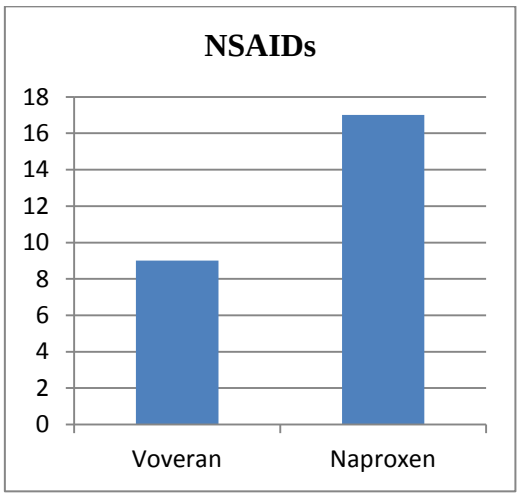
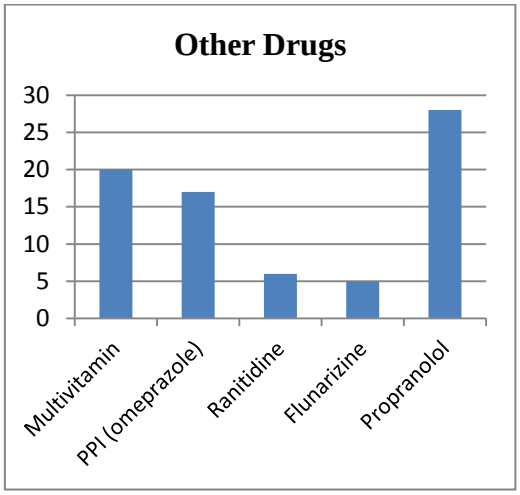
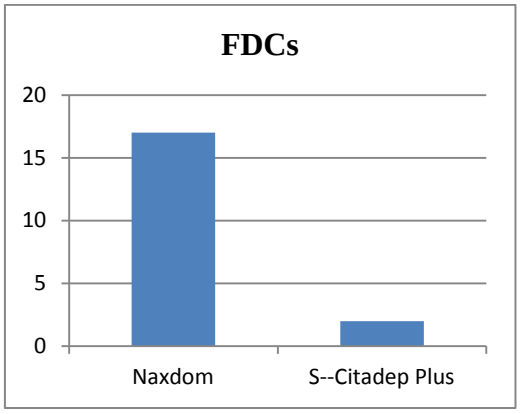


Figure 5 Pattern of other Drugs





Discussion

Prescription gives insight into nature of healthcare delivery system in drug utilization research[(4)]. Drug utilization study is defined as a study of the marketing, distribution, prescription and use of drugs in a society highlighting on the resulting medical, social and economic consequences[(5)] The burden of illness resulting from psychiatric and behavioral disorders is enormous, although it remains grossly under represented by conventional public health statistics. It is preferable to keep the number of drugs per prescription as low as possible since polypharmacy leads to increased risk of drug interactions, increased hospital cost] and errors of prescribing [(6)]. Depression and anxiety were the most common group of psychiatric conditions found in patients attending psychiatry outpatient department. Same finding was observed in other studies [(7,8)]. 21-40 years was the most common age group to whom psychotropic prescriptions were given. Increasing use of psychotropic drugs in this age group may be due to increased incidence of mental ill health, improved mental health literacy in general population, reduction in stigma associated with mental illness, increase in drug treatment option and due to more vigorous marketing of such medications[(9)]. Our study is first of its kind in ESIC hospitals where patients are insured persons from labor background. Our study found that female patients were more than the male patients. Earlier studies have reported similar findings [(10,11)]. Reproductive age group accounted for the majority of all psychiatric disorders.

The average number of drugs per prescription was 1.9 which is lower than previous studies [(12)]. However polypharmacy was avoided since no prescription had more than 5 drugs. As is already known that polypharmacy may lead to poor compliance drug interaction, ADRs and medication errors. Almost all drugs prescribed were generic drugs, since they are available in hospital pharmacy. The proprietary names were used for few antidepressant drugs for which patients later got reimbursement. No injections were prescribed in our study. Many Indian trials have evaluated the efficacy of depot antipsychotics in schizophrenia and have found that useful in the management of acute phase and maintenance treatment[(13)]. Concerns about adverse effects, cost and poor compliance of parentral routs are probable reason of non use of injections.

The most commonly prescribed FDCs were naproxane+ domperidone for migraine and escitalopram+ clonazepam for insomnia, anxiety and depression. Out of the two FDCs escitalopram+ clonazepam figures in the list of approved FDCs by CDSCO but FDC of naproxane+ domperidone is irrational combination. There is no justification of combining of an NSAID with a prokinetic agent [(14)]. Also this combination is only manufactured by two companies. The most pressing concern with FDCs is that they expose patient to cost burden and unnecessary risk of ADRs. Still there has been an increase in prescription of irrational FDCs in recent past and many are available as over the counter drugs [(15)].

Most commonly prescribed drug in our study were antidepressants (72%) followed by benzodia-zepines (52%), beta blockers (20%) NSAIDs (20%) and antipsychotics (11%). Among the antidepressant drugs prescribing frequency of SSRI was more than TCA and atypical agents. SSRIs are generally better tolerated which is the reason for their popularity in treatment of insomnia, anxiety and depression. Also this matches the current recommendations (APA & NICE) in the management of mood disorders [(16)].

Moreover the SSRIs were given in combination with benzodiazepines because of the potential benefit of this combination. Furukawa and colleagues have reported that this combination decreases the dropouts from the treatment and increases short term response up to 4 weeks[17] Escitalopram was the most prescribed antidepressant followed by fluoxetine. It was observed that antidepressants were prescribed in almost all conditions apart from depression such as headache, Premature Ejaculation, Generalised Anxiety Disorder, Obsessive Compulsive Disorder and Psychosis.

Clonazepam was the most frequent benzodiazepine used. They are remarkably useful and efficacious in a wide range of conditions for short term or intermittent use. However, with long term use the adverse effects (memory impairment, depression, tolerance, dependence) outweigh the benefits, which should be minimized by rational prescribing. Guidelines for the rational use of benzodiazepines recommend their use for short term (maximum four week) or intermittent courses in minimum effective doses, to be prescribed only when symptoms are severe[18]. Efficacy data support use of benzodiazepines in treating prodromal and early warning signs and symptoms of exacerbation of schizophrenia for psychosis[19]. Atypical antipsychotics were the only drugs prescribed. They are now rated as first line agents because of their low propensity to cause EPS, efficacy against refractory cases and better control over negative symptoms and low relapse rate [20].

24% of patients coming to psychiatry OPD suffer from one or other kind of headache associated with anxiety or insomnia. In tension type headache antidepressants and benzodiazepines were prescribed along with NSAIDs. While in migraine triptans were more commonly prescribed. Beta blockers and calcium channel blockers were prescribed as prophylactic medications. Overall drug utilization in headache was in accordance with neurophysician prescription guidelines.

Conclusion

In conclusion our study advocated and overall rational utilization of psychotropic drugs and pattern of prescribing with a fewer deviation from standard treatment guidelines due to socio-economic conditions of patients, budget constraints and technical difficulties. We would like to recommend that the hospital formulary need to procure more quantity of SSRIs, which are out of stock from time to time. Second, since antidepressants need to be prescribed in almost all psychiatric conditions their use should be rationalized and safer alternatives should be preferred. Prescription audit give scope for prescriber to improve their prescribing practice and rational use of drugs. There is scope to extend this study by evaluating drugs compliance and adverse drug reactions of psychotropic drugs since our institute has now been recognized as adverse drug monitoring centre by PvPI.

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Conflict of Interest: None

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