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Drug Utilisation Pattern of Psychotropic Drugs Prescribed in the Outdoor Patient of Psychiatric Department in a Tertiary Care Hospital - A Retrospective Observational Study

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ABSTRACT

Background: Psychiatric disorders are emerging as a major disorder affecting society from young to old population. The burden of its management is also a problem with polypharmacy rising hand in hand. **Objectives**: To assess drug utilisation pattern of psychotropic drug. **Material and method**: 200 case record forms of outdoor patient collected randomly visiting psychiatric OPD in a tertiary care hospital from January 2018 to April 2018 from hospital management and information system was analysed. All patient >10 years of age and both sexes visiting the psychiatry OPD were included. Those not prescribed with psychotropic drugs were excluded. The result was analysed in Microsoft excel 2010 and expressed as whole number and percentage. **Result**: Among 200 case record forms of outdoor patient analysed 56% males ,44%females.Age range of patients were 10 to 20 years (11%),21to 30 years(24.5%),31 to 40years(29.5%),41 to 50 years (19%),51 to 60 years(7%), >61%(9%).Among 438 drugs Trifluoperazine 16.89%, Resperidone 16.44%,Clonazepam 14.38%,Sodium valproate 8.90%, Trihexyphenydl 7.76%, Lorazepam 7.53%, Olanzipine 5.48%, Haloperidol 4.57%, Amitriptyline 3.20%, Sertaline 3.20%, Imipramine 2.28% Carbamazepine 2.05%, Phenytoin sodium 1.60%, Fluoxitine 1.60%, Clozapine 1.60%, Diazepam 1.37%, Phenobarbitone 0.91%, thium 0.23%. 58.67% of drugs in generic name, 75.32% of drugs from essential medicine list, 13.69% of the evaluated case record form used Fixed dose combination. Number of drugs per case record form <4 (9),4 to 6(126) and >7(65). **Conclusion:** Polypharmacy should be carefully monitored and a check on adverse drug reaction should be maintained. With the pace of increasing psychiatric illness such studies should be carried out frequently to know about the changing trends and patterns followed elsewhere and modified accordingly.

INTRODUCTION:

Psychotropic, Psychoactive or Psychotherapeutic drugs are the medication used for pharmacological treatment of mental disorders.[1]

WHO defined Drug Utilization Study as the marketing, distribution, prescription and the use of drugs in a society with special emphasis on the resulting medical social and economic consequences [2]. Drug utilization studies are important to ensure and promote rational use of drugs to enhance therapeutic efficacy, provide feedback to prescribers and decreasing the incidence of Adverse drug reaction [3]. Polypharmacy that is prescription, administration, or use of more medications than are clinically indicated in a given patient which may range from 3-4 drugs to as many as 10-12 drugs per prescription.[4] which increases risk of irrational prescribing delaying the benefits.[5]

WHO estimates that mental and behavioural disorders account for about 12% of the global burden of the diseases[6].In our country prevalence range of psychiatric morbidity 9.5 to 102 per 1000 population[7]**.** Psychiatric disorder as an emerging problem is affecting all sections of society from young to old with estimated worldwide burden of psychiatric morbidity in children and adolescents is about 20% [8] posing a serious problem in India where more than 40% of the population is<18 years of age[9]. Psychotropic drug use in elderly imposes a different set of challenges since effect of psychotropic drug is compounded by the presence of comorbidities with polypharmacy.[10]

Since the field of psychopharmacology is expanding psychiatrist are exposed to number of drugs that claim to be safe and efficacious [11] however their consequences and utilization on real life effectiveness and safety in clinical practices requires to be evaluated continuously [12]. In Indian context there is minimal data on drug utilization study of psychotropic drugs are available [13]. Present study was thus undertaken to study the drug utilization pattern of psychotropic drugs at our institution.

MATERIAL AND METHODS:

A retrospective observational study was carried out in the outdoor patient of psychiatric department in Government medical college Akola, Maharashtra, India.

200 case record forms selected randomly from hospital information and management system in a predesigned proforma containing the initials of the patient, age, sex, name of the drug,

dose, route, duration, frequency, generic or brand name, monotherapy or fixed dose combination.

Inclusion criteria:

All patients >10 years of age visiting the psychiatric OPD from January 2018-April 2018 were included and being prescribed with psychotropic drugs.

Exclusion criteria

Patients not receiving any psychotropic treatment were excluded.

The result was analyzed in Microsoft excel 2010 and expressed as whole number and percentage.

RESULTS:

In the present study, 200 case record forms were selected randomly from the hospital information and management system in a predesigned proforma containing the initials of the patient, age, sex, name of the psychotropic drug prescribed, dose, route duration, frequency, generic or brand name, monotherapy or fixed dose combination.

All patients >10 years of age visiting the psychiatric OPD from January 2018-April 2018 were included. Patients not receiving any psychotropic treatment were excluded.

13.69% of the 200 evaluated case record forms used fixed dose combination.

58.67% of 438 drugs were prescribed by generic name.

75.32% of the 438 drugs were from essential medicine list (20th list March 2017, Amended August 2017).

Average number of drugs per prescription is 2.19.

Amongst the included 200 case record forms of respective patients 56% were male and 44% were females.[Figure 1]

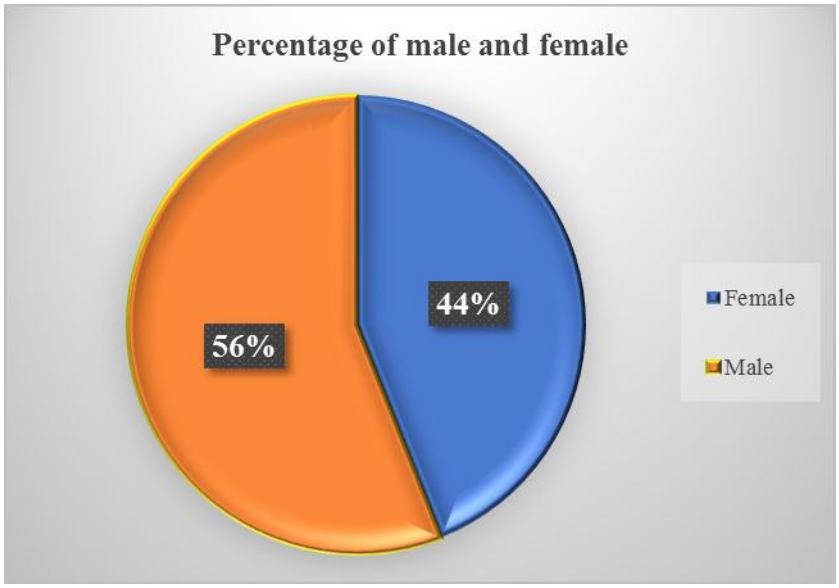

Figure No. 1: Showing out of 200 case record forms percentage of the patients who were female and male

Among the 200 case record forms analysed 11% of the patient belonged to the age range of 10 to 20 years,24.5% of the patient belonged to age range of 21 to 30 years,29.5% of the patient belonged to age range of 31 to 40 years, 19% of the patients belonged to age range of 41 to 50 years,7% of the patient belonged to age range of51 to 60 years, 9% of the patient belonged to age range of >61 years.[Figure 2]

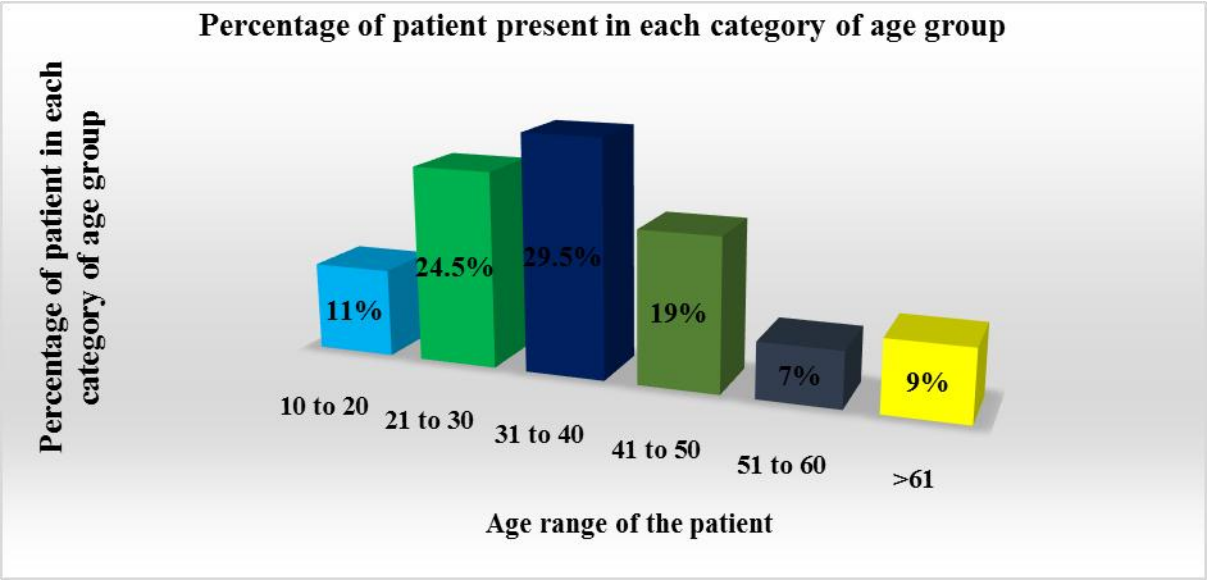

Figure No. 2: Showing the percentage of patient in each category of age group among the 200 case record forms analyzed

There were a total of 438 drugs in the 200 prescription analyzed which included.

Trihexyphenydl 7.76%,Trifluoperazine 16.89%, Sodium Valproate 8.90%,Sertaline 3.20%, Resperidone 16.44%,Phenytoin Sodium 1.60%,Phenobarbitone 0.91%,Olanzipine 5.48%,Lorazepam 7.53%,Lithium 0.23%,Imipramine 2.28%,Haloperidol 4.57%,Fluoxitine 1.60%,Diazepam 1.37%,Clozapine 1.60% ,Clonazepam 14.38%, Carbamazepine 2.05%, Amitriptyline 3.20%. [Figure 3]

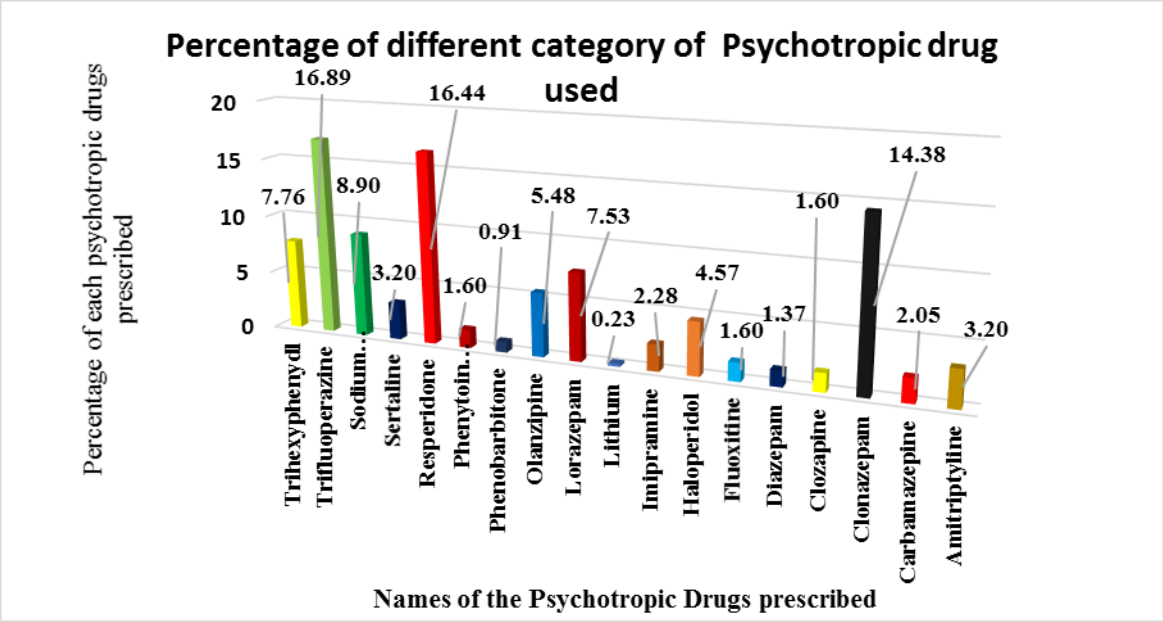

Figure No. 3: Out of 438 drugs in total the percentage of different types of psychotropic drugs are shown

Among the 200 case record forms analysed,<4 drugs were present in 9 prescriptions,4 to 6 drugs were present in 126 prescriptions and >7 drugs were present in 65 prescriptions.[figure 4]

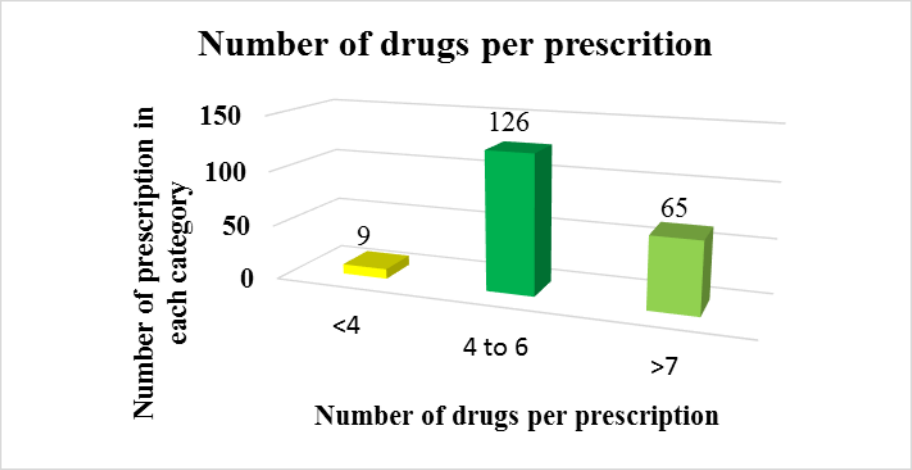

Figure No. 4: Out of the 200 case record forms analyzed number of drugs per case record form

DISCUSSION:

According to the present study all are given by oral route which is similar to the result obtained by Pranab Kumar et al [17] and 58.67% of the psychotropic drugs are prescribed by generic name which is also more than the result obtained by Arul et al[15] which is just 50.45% and only 13.69% are prescribed in fixed dose combination as per the present study whereas 11% were present in fixed dose as per the study performed by Arul et al.[15]

75.32% of the psychotropic drugs are from Essential medicine list [16]which is greater than the result obtained by Arul et al [15]where only 65.2% drugs are from Essential medicine list.

In this study males 56% was more in number compared to females 44% suffering from psychiatric illness which was also similar to the result obtained by Kumar S et al [13], Kingshuk lahon et al[5], Kamnath et al[10], Arul et al[15], Piparva et al [14]in similar type of study.[Figure 1]

As per the study conducted by Kumar s et al[13], Arul et al[15] similar result was obtained in the present study that 31 to 40years is the most common age group where psychotropic drugs are used.[Figure 2]

In the present study trifluoperazine in the most used psychotropic drug having a percentage of 16.89% followed by risperidone 16.44% whereas in a study performed by Arul et al [15]risperidone is preferred more. [Figure 3]

According to WHO average number of drugs prescribed per prescription is 2 whereas in the present study average number of drugs prescribed per prescription is 2.19 which is higher however lower then than of study performed by Kumar et al [13]which was 6.09 and Arul et al [15]which was 3.83. Number of drugs per prescription as per the present study is that <4 drugs 9,4-6 drugs per prescription 126,>7 drugs per prescription 65 which suggests of polypharmacy.[Figure 4]

CONCLUSION

Number of drugs per prescription should be reduced.

Educational intervention to promote rational use of drugs should be initiated.

Periodic evaluation of prescribing pattern to improve prescribing standards as well as to keep pace with the new drugs which are equally efficacious in safety and efficacy compared to the existing drug should be carried out.

Limitation

The present study is a generalized and retrospective study hence further prospective study should be carried out so that patient care and facility indicators can be analyzed better and whether treatment is as per the standard treatment guidelines and as per the indication can be better analyzed for more better assessment of rationality of drug use.

Adverse drug reactions occurring or may be occurring to the patient from the drugs prescribed were not included since it was a retrospective study. Since a track on the Adverse drug reactions are important and dire need of current times to reduce the unnecessary increase in cost a further prospective study is needed.

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Conflict of interest: nil

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