

PATTERNS OF PRESCRIPTION IN A PSYCHIATRY OUT PATIENT DEPARTMENT IN A TEACHING HOSPITAL IN BANGLADESH

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ABSTRACT

A cross-sectional descriptive study was carried out among individuals attending the psychiatry out-patient department from February 1st 2010 to April 30th 2010 in Sir Salimullah Medical College and Mitford Hospital, Dhaka, Bangladesh to see the patterns of prescription and drug use in psychiatry out-patient department of teaching hospital in Bangladesh. A total of 300 patient were included in this study. The average number of drugs per encounter was 2.44 drugs were prescribed by generic name. The commonest clinical indication were schizophrenia and other psychotic disorder (40%) and use of psychotropic drug (36%) frequently but injection use (8.33%) was very low, additional (anticholinergic) drugs were prescribed 76% of prescription. Average cost of drugs per prescription was 181 taka. So, the study will help to understand the trends in prescribing psychotropic drugs and will provide guidelines for designing appropriate future intervention strategies in order to promote rational prescribing and improve the quality of health care.

Keywords: Psychotropic drugs, Prescribing patterns, Drug utilization.

(Bangladesh J Physiol Pharmacol 2012;28(1&2):19-22.)

INTRODUCTION

Psychiatric disorders are common in patients at general practitioners. Psychotropic drugs are one important mode of treatment and prescribed frequently.¹ Today mental health and mental illness are key public health issues. A large number of people worldwide suffer from mental disorders and many more around them encounter the impact of these illness. According to the WHO at least 40 million people in the world suffer from mental disorder such as schizophrenia and dementia.² Rational drug prescribing is defined as the use of the least number of drugs to obtain the best possible effect in the shortest period and at a reasonable cost.³ Studies conducted on drug use in health facilities of Bangladesh describes drug use patterns, prescribing behaviour, cost analysis and effect of interventions.^{4,5,6} The assessment of drug utilization is important for clinical, educational and economic purpose. Prescribing patterns need to be evaluated periodically to increase the therapeutic efficacy, decrease adverse effects and provide feedback to prescribers.⁷ Drug utilization reviews are useful for obtaining information about drug use patterns and for identifying high cost drugs.^{5,8,9,10,11,12} Medical audit oversees the observance of standards of medical care at

all levels of the health care delivery system".⁵ Mental illness is most neglected disease in Bangladesh, although a large number of people are suffering from different types of mental illness.

MATERIALS AND METHODS

A cross-sectional descriptive study was carried out at the Sir Salimullah Medical College and Hospital (SSMC & MH), a tertiary care hospital, Dhaka. The study was carried out over a 90 days period of February 1st 2010 to April 30th 2010. The patients and their prescriptions were used as source of data. A total 300 patients were included in this study. The average number of drugs per prescription, most common diagnosis, most commonly prescribed psychotropic drugs, percentage of drugs prescribed by trade name were also noted and percentage of encounters with an injection prescribed. The number of combination preparations and the average cost of drugs per prescription were also calculated. The data was expressed as percentage, mean and total numbers.

RESULTS

A total of 732 individual drugs were prescribed for 300 drug encounters, giving an average of 2.44.

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Table I
Shows the average number of drugs per prescription

Total number of prescription	Total numbers of drugs	Average number of drugs
300	732	2.44

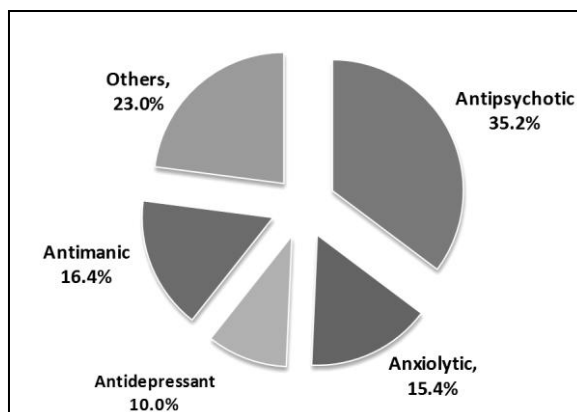
The range of drugs per encounter varied from 1-5, As shown in Table II, two (02) drug were prescribed in 96 prescriptions (32.00%) was found to be highest among 300 prescriptions.

Table II
Shows the incidence of polypharmacy

Number of drugs per prescription	Number of prescription	Percentage
0	01	00.33%
1	71	23.66%
2	96	32.00%
3	61	20.33%
4	69	23.00%
5	02	00.66%
Total	300	100.00%

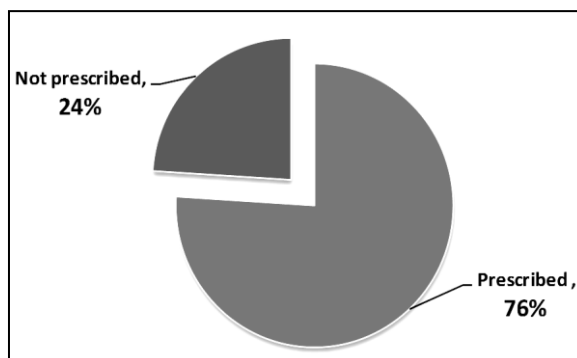
The most commonly prescribed psychotropic drugs was atypical antipsychotic drugs 258 (36.00%), the most commonly prescribing psychotropic drugs are shown in Pie diagram.

Pie diagram shows the type of psychotropic drugs prescribed



Drugs were not prescribed by generic names and out of 300 prescriptions additional drugs (anticholinergic drugs) 228 (76%) were prescribed.

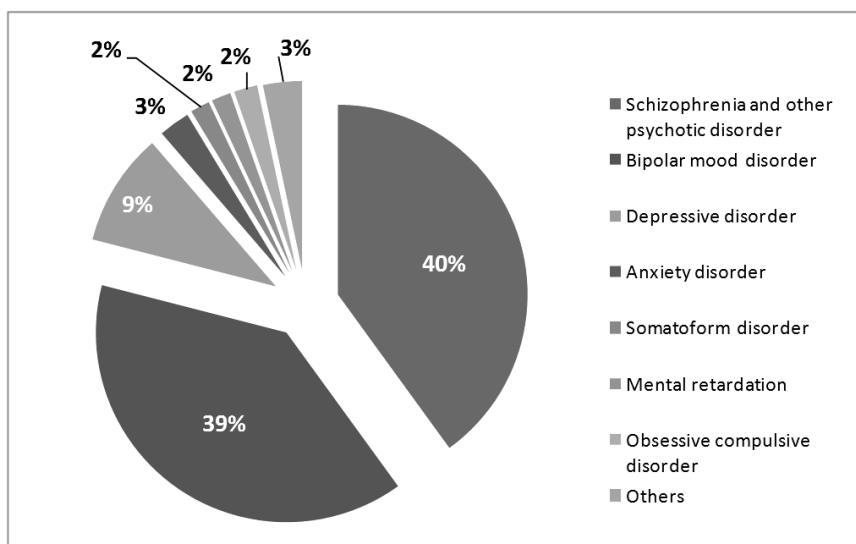
Pie diagram Shows the drugs prescribed to counter the adverse effects of psychotropic drugs



Schizophrenia and other psychotic disorder (40%) were the most common complaints/disorder among the patient attending psychiatry OPD. The other common complaints/ disorders were bipolar mood

disorder (39%), depressive disorder (9.66%), anxiety disorder (2.66%), somatoform disorder (1.66%), mental retardation (1.66%), OCD (2%) and others (3.33%).

Pie diagram shows the psychiatric disorder for which psychotropic drugs were prescribed



DISCUSSION

A total of 300 prescriptions containing Psychotropic drugs were collected from patients attending the Psychiatry out-patient Department of teaching hospital in Dhaka city. Schizophrenia and other psychotic disorder (40%) were the most common complaints/disorder among the patient attending psychiatry OPD. In a study, in Germany, the most common complaints are Schizophrenic psychosis (50%).¹³ This rate is very similar to present rate. In Nepal, Somatoform disorder (26%) were the most common complaints.¹⁴ The other common complaints/ disorders were bipolar mood disorder (39%), depressive disorder (9.66%), anxiety disorder (2.66%), somatoform disorder (1.66%), mental retardation (1.66%), OCD (2%) and others (3.33%). Only 8.33% of the drugs were prescribed by parenteral formulation, minimum use of injections is preferred and this reduces the risk of infection through parenteral route and cost incurred in therapy.¹ In this study, 300 (100%) of the drugs were prescribed by trade name. The percentage of drugs prescribed by generic name was 0% in the study which is very much less than that reported in studies conducted in Cambodia¹⁵(99.8%), India¹⁶ (73.4%) and Nepal(21.3%).¹⁷ The most common reasons for not prescribing generic name in Bangladesh may be tradition, low production of generic drugs in Bangladesh and currently, most of the pharmaceutical companies' divertive drug promotion technique.⁴ The average number of drugs per prescription was 2.44. In Japan, they received 2.5 drugs per prescription.¹⁸ In Brazil, 2.30 drugs per prescription.¹⁹ This rate is very

similar to present rate. In the treatment of patients with schizophrenic disorders, this discrepancy becomes particularly clear where combination therapy is the rule in clinical practice. In this regard, an increase has been observed in the use of combination treatment.²¹ Indeed, among therapy resistant affective disorder, a growth in polypharmacy has also been noted. The frequency of polypharmacy increases with the length and severity of the illness.²² Women patients were prescribed more Psychotropic drugs than men. Majority of the patients (32%) received 2 drugs per prescription. The drugs were generally prescribed for time duration of 15 days. The average cost of drugs per prescription was 181 taka for 15 days duration. Additional drugs were prescribed 288(76%) prescription to counter the extrapyramidal effects. Psychotropic medications are widely prescribed^{23,24} and the utilization of psychotropic drugs is a topic of increasing interest.

CONCLUSION

Overall prescribing patterns of Psychotropic drugs among the Sir Salimullah Medical College & Mitford hospital is good and satisfactory. Appropriate educational intervention should be designed for rational prescribing to improve the quality of health care.

REFERENCES

1. Linden M, Lecrubier Y, Bellantuono C, Benkert O, Kisely S, Simon G. Psychotropic drug prescription in primary care. *J Euro Psych* 1996; 11: S 4: 179s.
2. Fahmida A, Wahab MA, Rahman MM. Pattern of psychiatric morbidity among the patients admitted in a private psychiatric clinic. *Bang J Med Sci* 2009; 8: 1-2.
3. Gross F. Drug utilization therapy and practice. The present situation in Federal Republic of Germany. *Eur J Clin Pharmacol* 1981; 19: 387-94.
4. Rahman MS, Begum M, Khan IA, Chowdhury S, Islam AMZ, Sultana R, Hoque MZ, Akhter N. A Baseline Survey on the Use of Drugs at Private Practitioner Level in Bangladesh. *Bang J Physiol Pharmacol* 1998; 14(2): 47-50.
5. Islam MS, Rahman MS, Misbahuddin M. Impact of 'Prescription Audit & Feedback' on Pattern of Prophylactic Antimicrobials in Caesarean Section: a Cost Reduction Perspective. *Bang J Physiol Pharmacol* 2007; 23: 1-9.
6. Chowdhury AK, Rahman MS, Faroque AB, Hasan GA, Raihan SZ. Excessive use of avoidable therapeutic injections in the upazilla health complexes of Bangladesh. *Mymensingh Med J*. 2008; 17(2 Suppl): S59-64.
7. World Health Organization (WHO). Action programme for essential drugs. How to investigate drug use in health facilities. WHO, 1993.
8. Pradhan SC, Shedwade DG, Shashindran CH, Bapan JS. Drug utilization studies. *National Med J India* 1988; 1: 185-189.
9. Krishnaswamy K, Dinesh Kumar B, Radhaiah GA. Drug use survey-precepts and practice. *Eur J Clin Pharmacol* 1985; 29: 363-370.
10. Uppal R, Nayak P, Sharma PL. Prescribing trends in internal medicine. *Int J Clin Pharm Ther Toxicol* 1984; 22: 363-370.
11. Mashner JP, Thurmann P, Harder S, Rietbroc N. Drug utilization review on a surgical intensive care unit. *Int J Clin Pharmacol Ther* 1994; 32: 447-451.
12. Gupta N, Sharma D, Garg SK, Bhargava VK. Auditing of prescription to study antimicrobials in a tertiary hospital. *Indian J Pharmacol* 1997; 29: 411-15.
13. Bernd R. Brüggemann, Hermann Elgeti, Marc Ziegenbein. Patterns of drug prescription in a psychiatry outpatient care unit. *German J Psychiatry* 2008; 11: 1-6.
14. Shankar PR, S Roy. Patterns of Prescription and Drug use in a Psychiatry out-patient department in a teaching hospital in Western Nepal. *Int J Pharmacol* 2002; 1: 2.
15. Chareonkul C, Khun VL, Boonshuyar C. Rational drug use in Cambodia: study of three pilot health centers in Kampong Thom Province. *Southeast Asian J Trop Med Public Health* 2002; 33: 418-424.
16. Karande S, Sankhe P, Kulkarni M. Patterns of prescription and drug dispensing. *Indian J Pediatr* 2005;72:112-121.
17. Ghimire S, Nepal S, Bhandari S, Nepal P, Palaian S.A prospective surveillance of drug prescribing and dispensing in a teaching hospital in Western Nepal. *J Pak Med Assoc* 2009; 59: 726-731.
18. Keohavong B, Syhakhng L, Sengaloundeth S, Nishimura A, Ito K. *Pharmacoepidemiology Drug Safety* 2006; 15: 344-247.
19. de Oliveira J, Naves S, Dee Silver L. Evaluation of Pharmaceutical assistance in public primary care in Brasília, Brazil. *Rev Saúde Pública* 2005; 39: 223-30.
20. Messer T, Tiltscher C, Schmauss M. Polypharmacy in the treatment of schizophrenia [German]. *Fortschr Neurol Psychiat* 2006; 74: 377-391.
21. Clark RE, Bartels SJ, Mellmann TA, Peacock WJ. Recent trend in antipsychotic combination therapy of schizophrenia and schizoaffective disorder: implications for state mental health policy. *Schizophr Bull* 2002; 28: 75-84.
22. Frye MA, Ketter TA, Leverich GS, Huggins T, Lant C, Denicoff KD, Post RM. The increasing use of polypharmacotherapy for refractory mood disorders: 22years of study. *J Clin Psychiatry* 2000; 61: 9-15.
23. Linden M, Scheel T, Xaver EF. Dosage finding and outcome in the treatment of schizophrenia in patients with amisulpride. Results of a drug utilization observation study. *Hum psychopharmacol* 2004;19:119.
24. Pincus HA, Tanician TL, Marcus SC, Olfson M, Zarin DA, Thompso J et care, psychiatry, and other medical specialities. *JAMA* 1998; 279: 526-31.