



ISSN: 0976-3376

Available Online at <http://www.journalajst.com>

ASIAN JOURNAL OF
SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology
Vol.06, Issue, 09, pp. 1799-1801, September, 2015

RESEARCH ARTICLE

THE STUDY OF PRESCRIBING PATTERN OF GENERAL PRACTITIONERS IN A SEMI URBAN AREA – AN AUDIT

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ARTICLE INFO

Article History:

Received 13th June, 2015
Received in revised form
18th July, 2015
Accepted 27th August, 2015
Published online 30th September, 2015

Key words:

General Practitioners Essential Drug
List Polypharmacy Patient Medical
Information WHO / INRUD indicators
Rational prescribing.

ABSTRACT

Aim: To study the prescribing pattern of General Practitioners in a Semi Urban Area.

Methodology and Results: In this study, a total of 500 prescriptions were collected from the general practitioners of Viluppuram, a semi urban area and analyzed using WHO/INRUD indicators. There were average 3.5 drugs per Prescription. Drugs were prescribed in generic name only in 0.32%. About 52% drugs were prescribed from Essential drug list, only 21% of prescriptions were complete in respect to patient medication information. Antibiotics were prescribed in 70% of prescription; injection were prescribed in about 9.25% of the prescription.

Conclusion: There was poly pharmacy, decreased use of drugs from EDL, increased use of antibiotics and reduction in patient medical information in our study.

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INTRODUCTION

Drugs play an important role in protecting, maintaining and restoring health. In recent years there has been a tremendous increase in the number of pharmaceutical products in the market (WHO, 1977). Medically inappropriate and economically inefficient use of medicines is observed throughout the world. These features are more marked in the developing countries like India. Rational use of medicines is one essential element to be achieved to improve quality of health and medical care for the patients and the community (Ross – Degnan *et al.*, 1992). Recently, health authorities in India have published an exhaustive national essential drug list of 279 items, consisting of 162 universal drugs and 117 items for secondary health care (National Essential drug list, 1996). Prescribing appropriate medicines for a disease condition and providing related information in a meaningful way to the patients should be regarded as the key 'transferable skills' to be active through pharmacology courses (Rahman *et al.*, 1998). Generalized presence of irrationalities in prescribing indicates that teaching in medical schools does not adequately prepare students for rational therapeutics. Pharmacology training has concentrated more on theory than on practical aspects of prescribing (De vries, 1993). Prescribing behavior of the general practitioners depends upon how they have been taught and trained about drugs during their undergraduate course.

General practitioners should be helped to learn how to choose drugs appropriately for prescribing (Ramsay, 1996). The present study reports the results of a prescription audit in Viluppuram, a semi urban area in Tamilnadu state to quantify any correlation between the prescribing behavior of general practitioners and the concept of essential drugs and to identify prescribing errors using WHO indicators (Hogerzeil, 1995).

MATERIALS AND METHODS

Samples of prescriptions by general practitioners were collected from patients randomly. Mode of collection was collection prescriptions by photocopy or by digital camera after taking consent of patients. A total of 500 prescriptions were the study sample. Afterwards all prescription (500) were analyzed using the WHO INRUD indicators.

Following Parameters were analyzed

- Average number of drugs per prescription.
- Percentage of drugs prescribed by generic name.
- Percentage of prescriptions with an antibiotic prescribed.
- Percentage of prescriptions with an injection prescribed.
- Percentage of drugs prescribed from essential drug list.
- Whether prescription is complete with respect to (a) format (b) dosage and duration (c) patient medication information (PMI)

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The sum total of average and percentages were calculated by using the standard formulas in whose manual. "How to investigate drug use in health facilities"

RESULTS

A total of 1728 drugs were prescribed in all prescriptions. Average number of drugs per prescription was 3.50. Only 0.32% of the drugs were prescribed under generic name. Antibiotics constituted 69.8% of prescriptions. Injections were prescribed in about 9.25% of prescriptions. Only 36.72% of prescriptions were complete in regard to standard prescription format. About 52% of drugs were prescribed from the EDL. Only 21% of prescriptions were complete in respect to patient medication information.

Table 1. Results of Prescription Audit (n=500)

Prescribing indicator	Results
Average number of drugs per prescription	3.50
Percentage of drugs prescribed by generic name	0.32%
Percentage of prescriptions with an antibiotics prescribed	69.8%
Percentage of prescriptions with an injection prescribed	9.25
Percentage of drugs prescribed from Essential Drugs list	52%
Whether prescription is complete with respect to format.	36.72%
Dosage and duration	78
Patient Medication information	21%

Table 2 describes this list of diagnosis made by the practitioners as mentioned in the prescription.

Table 2. List of Diagnosis made by the Practitioners as Mentioned in the Prescriptions

S.No.	Diagnosis	Number of Patients %	
1.	Upper respiratory tract infection	132	26%
2.	Acid Peptic Disease	68	13%
3.	Lower respiratory tract infection	62	12%
4.	Myalgia	58	11%
5.	Anaemia	40	8%
6.	Pyrexia of unknown origin	26	5%
7.	Typhoid fever	18	3%
8.	Impetigo	24	5%
9.	Chronic Obstructive pulmonary disease	22	4%
10.	Osteoarthritis	28	6%
11.	Others	22	4%

Table 3 depicts the list of drugs prescribed

Table 3. List of drugs Prescribed

Drug	Percentage
Paracetamol	22%
Cefixime	18%
Pantoprazole	12%
Multivitamins	10%
Ranitidine	8%
Azithromycin	5%
Albendazole	8%
Ciprofloxacin	5%
Aceclofenac	12%
Amoxycillin	10%
Cetirizine	18%
Others	22%

Table 4 shows the prescribed fixed dose combination

Table 4. List OF fixed Fose Combinations

S.no.	FDC	Percentage
1	Aceclofenac + Paracetamol + Serratiopetidase	29%
2	Ofloxacin + Ornidazole	20%
3	Paracetamol + Aceclofenac	12%
4	Amoxycillin + Cloxacillin	10%
5	Cefixime + Ofloxacin	18%
6	Amoxycillin + Clavulnic Acid	11%
7	Thiocolchicoside + Aceclofenac	8%
8	Fexofendaine + Monteleukast	9%
9	Glimepride + Metformine	10%

DISCUSSION

This study was an attempt to find the existing pattern of prescription writing among general practitioners in Viluppuram, a semi urban area. Through the exercise we identified that on an average 3.5 drugs were prescribed per encounter (ideal : 1.6 – 1.8). In the current study only 0.32% drugs were prescribed by generic name (ideal 100%). Around 70% prescriptions contained antibiotics (ideal 20-26.8%). Injections were found 9.25% (ideal: 13.4-24.1%) of the prescriptions. Drugs from EDL was 52% (ideal 100%). About 78% prescription were provided with proper instructions regarding drug dosing, formulation and duration, which was 70% in the study of Rahman *et al.* In only 36.72% of prescriptions, the format was appropriate. PMI (Patient medication information was complete only in 21% of prescription. Upper respiratory tract infections were the commonest cause patients seek medical advice to general practitioners. In present day general practice cefixime is the commonly used antibiotic. General practitioners use variety of fixed drug combination. Our study also revealed the hand writing was illegible in one third of prescriptions. The illegibility of (unclear hand writing) hand writing could result in misinterpretation and mistakes (WHO/DAP, 1994).

Conclusion

From this study, it is obvious that poly pharmacy is prevalent among General Practitioners. There is reduced drug selection from EDL, provision of information to the patients. Use of antibiotics is high in GP. Irrational prescribing is a habit which is difficult to cure, prevention is possible. Intervention is needed to improve prescribing behavior of doctors such as short problem based training course in pharmacotherapy and rational use focused workshops can improve prescription behavior and skills⁽¹⁰⁾. Clear and comprehensive rules should be formulated and implemented by the government to ensure rational prescribing.

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