Prescribing Pattern of General Practitioners– an Analysis

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ABSTRACT *AIM : Prescribing pattern of General Practitioners –an analysis METHODOLOGY AND RESULTS: In this study, a total of 600 prescriptions were collected from the general practitioners of Viluppuram, a semi urban area and analyzed using WHO/INRUD indicators. There were average 4.5 drugs per Prescription. Drugs were prescribed in generic name only in 0.52%. About 58% drugs were prescribed from Essential drug list, only 20% of prescriptions were complete in respect to patient medication information. Antibiotics were prescribed in 74% of pre-scription; injection were prescribed in about 10.5% of the prescription.*

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

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 [1]. 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[2].

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 [3]. 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[4]H. 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 [5]. 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[6]. 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[7].

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 600 prescriptions were the study sample. Afterwards all prescription (600) were analyzed using the WHO INRUD indicators.

Following Parameters were analyzed :
1. Average number of drugs per prescription.
2. Percentage of drugs prescribed by generic name.
3. Percentage of prescriptions with an antibiotic prescribed.
4. Percentage of prescriptions with an injection prescribed.
5. Percentage of drugs prescribed from essential drug list.
6. Whether prescription is complete with respect to (a) format (b) dosage and duration (c) patient medication information (PMI)

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

Results : A total of 2700 drugs were prescribed in all prescriptions. Average number of drugs per prescription was 4.50. Only 0.52% of the drugs were prescribed under generic name. Antibiotics constituted 74 of prescriptions. Injections were prescribed in about 10.5% of prescriptions. Only 20% of prescriptions were complete in regard to standard prescription format. About 58% of drugs were prescribed form the EDL. Only 20% of prescriptions were complete in respect to patient medication information.

TABLE – 1
RESULTS OF PRESCRITPION AUDIT (n=600)

PRESCRIBING INDICATOR	RESULTS
Average number of drugs per prescription	4.50
Percentage of drugs prescribed by generic name	0.52%
Percentage of prescriptions with an antibiotics prescribed	74%
Percentage of prescriptions with an injection prescribed	10.5
Percentage of drugs prescribed from Essential Drugs list	58%
Whether prescription is complete with respect to format.	36.72%
Dosage and duration	78%
Patient Medication information	20%

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	148	25%
2.	Acid Peptic Disease	82	17%
3.	Lower respiratory tract infection	76	13%
4.	Myalgia	64	11%
5.	Anaemia	50	8%
6.	Pyrexia of unknown origin	32	5%
7.	Typhoid fever	22	3%
8.	Impetigo	32	5%
9.	Chronic Obstructive pulmonary disease	22	4%
10.	Osteoarthritis	42	7%
11.	Others	30	5%

Table – 3 depicts the list of drugs prescribed

TABLE – 3
LIST OF DRUGS PRESCRIBED

Drug	Percentage
Paracetamol	28%
Cefixime	22%
Pantoprazole	12%
Multivitamins	13%
Ranitidine	9%
Azithromycin	5%
Albendazole	8%
Ciprofloxacin	5%
Aceclofenac	18%
Amoxycillin	15%
Cetrizine	22%
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	32%
2	Ofloxacin + Ornidazole	28%
3	Paracetamol + Aceclofenac	16%
4	Amoxycillin + Cloxacillin	12%
5	Cefixime + Ofloxacin	20%
6	Amoxycillin + Clavulinic Acid	19%
7	Thiocolchicoside + Aceclofenacl	10%
8	Fexofendaine + Monteleukast	11%
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 4.5 drugs were prescribed per encounter (ideal : 1.6 – 1.8). In the current study only 0.52% drugs were prescribed by generic name (ideal 100%). Around 74 prescriptions contained antibiotics (ideal 20-26.8%). Injections were found 10.5% (ideal : 13.4-24.1%) of the prescriptions. Drugs from EDL was 58 (ideal 100%). About 78% prescription were provided with proper instructions regarding drug dosing, formulation and duration, which was 70% in the study of Rahman Zet all[8]. In only 36.72% of prescriptions, the format was appropriate. PMI (Patient medication information was complete only in 20% 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[9].

CONCLUSION
From this study, it is obvious that polypharmacy 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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