



**ANALYSIS OF PRESCRIPTION PATTERN OF GENERAL PRACTITIONERS AT
DIFFERENT PHARMACIES IN AVADI- CHENNAI**

DR.J .THIRUNAVUKKARSAU¹ AND DR.V.KRISHNAN²

1Professor of Pharmacology , Saveetha Medical College , Chennai

2Assistant Professor of Pharmacology , Saveetha Medical College , Chennai

ABSTRACT

In our study which was done to assess the prescription pattern by the general physician for various illnesses at Avadi , Chennai showed 22 % percentage drugs were mentioned by its generic names and 78 % by their brand names. Out of all medicines used , 42 % of drug are essential drugs .Nearly 65% of antibiotics were seen in the analysed prescriptions and irrational use of multivitamins was also observed in our study

KEY WORDS: Prescription pattern, pharmacy, practioners, polypharmacy, Guidelines.

*Corresponding author



DR.V.KRISHNAN

Assistant Professor of Pharmacology , Saveetha Medical College , Chennai

INTRODUCTION

"If we doctors threw all our medicines into the sea, it would be that much better for our patients and that much worse for the fishes." , a famous quote by Oliver Wendell Holmes, a physician of seventeenth century holds well in today's world. Prescription should be written with meticulous care, every attempt must be made to use very essential drugs to the patients and not to hurdle them from unwanted drug effects and economic burden. For many reasons from treating physicians and to meet patients demand sometime, doctor has to prescribe more than what patient need. There are three corners are to be looked for in any prescription to say that is rational. Right drug, at right dose for right duration is still an unmet phenomenon in most of the clinical practice. World Health Organisation emphasizes on generic drug prescription which is more economical and also confers only need based medicines to the patients. Generic drug prescription fetching higher monetary benefits to the nation and patients directly. Apart from using only generic names, use of number of many number medicines belonging same group has to be curtailed .Using polypharmacy and prescribing more of drugs for one indication is an absolute hindrance for rational prescribing .This is of utmost importance in case of antimicrobials which can induce extensive drug resistant strains 'Super bug'- Carbapenem-resistant enterobacteriaceae is a definite gift of extensive misuse of antibiotics for trivial infections. Prescribing more number of commonly used drugs like analgesics, antacids, even multi vitamins are unethical and they are associated with their own significant adverse effects. Essential medicine list is created by most of the countries including India, in addition to it standard treatment guidelines is done in our country for various communicable and for non communicable diseases as well. Analysis of current trend at various corners will help us to evaluate current treatment practices, to assess the need of good prescribing practice, making legislation policy and even to make decisions for national programmes. When the deficiencies found, appropriate training and education for doctors and patients can be done more effectively. Hence this observation

study is planned to study prescription pattern of primary care physicians, who are all the first door approach by the patients for any clinical conditions, in selected area of Chennai.

MATERIALS AND METHODS

AIM

To study the drug prescription pattern among the general practitioners in Avadi, Chennai in the month of March-April 2014.

OBJECTIVES

To assess the prescription according with parameters of World Health Organisation core drug indicators. To assess the percentage of use of essential drug among general practioners

METHODOLOGY

This observational study was conducted between March and April 2014, in Avadi are of Chennai district. Data obtained from medical practioners with medical undergraduate degree without any specialisation who are mostly first line of approach by the common population Sample size was calculated as four hundred and pharmacies were selected by simple randomization. This was totally non interventional, prescription pattern was analysed from the photocopies of prescription coming to pharmacies from various general physicians. Data was collected and analysed for parameters as shown in results.

RESULTS - ANALYSIS OF PRESCRIPTION

In 400 prescriptions analysed, prescriber name, identity and registration number was identified in the script but patients complete demographic details was found only in 245 prescriptions with near misses of height, weight etc in the remaining prescriptions. Diagnosis (provisional) was written in 321 out of 400 prescriptions .on an average each prescription contains seven drugs and costing found to be Rs.89 per patient per day which denotes only drugs cost mentioned in prescription excluding physician fee and investigations. 359 prescriptions were clear in

dose frequencies and dosage schedule and 322 prescription shows dosage forms out 400. Duration of medication was found almost in all prescriptions but to analyse completely, 22 prescriptions did not give duration of all the medicines given by the prescriber .Only 22 % percentage drugs were mentioned by its

generic names and 78 % by their brand names. 65 % of total drugs used were antibiotics and 43 % parental injections used which includes antibiotics , analgesics and antihistamines .Analysis of total number of drugs shows only 42 % of drugs are coming essential drug medicines list .

Total no of prescriptions	400
Average of prescriptions with demographic parameters of patient mentioned	234
Average of prescriptions with prescriber details mentioned	400
Average of prescriptions with diagnosis mentioned	321
Average no of drugs per prescription	7
Average cost of medication in the prescription / day	89.00 Indian rupee
Average of prescriptions with Dose and frequency mentioned	359
Average of prescriptions with Dosage form mentioned	322
Average of prescriptions with Duration of therapy mentioned	378
Percentage of Drugs prescribed under generic name	22 %
Percentage of Drugs prescribed under brand name	78%
Percentage of antibiotics used	65%
Percentage of vitamins and supplements used	78%
Percentage of injections used	43%
Percentage of Essential drugs used	42%
Average no of irrational prescription	245

Table1
Shows Prescription analysis for core drug indicators.

DISCUSSION

This study was focussed with two distinct objectives, prescription completeness and rationality .Our study reflects nearly one third of prescription did not provide all the patient details in it. Complete patients must be given in superscription as patient may visit any other physician for other indication. Measuring height and weight is of paramount importance to prescribe correct dose and dosage forms .Each prescription contains average of seven medications. Apart from nutritional supplements, antibiotics 65 % were the most common medications given. Of all these oral antibiotics includes aminopencillins, macrolides followed by quinolones and antimalarials and most commonly prescribed parental antibiotic was third generation cephalosporins. Similar patterns of antibiotic usage were found in the research project, namely Global Antibiotic Resistance Partnership (GARP) - India Working Group. As much as 33 % of prescriptions contain two antibiotics for same indication and found to be

irrational. Misuse of antibiotics is well known factor contributing resistance among microbes. Analysis of other group of medicines reflects dominance of multivitamins 78% , antipyretics 56% , life style drugs 52 % (anti hypertensives , hypolipdemics , anxiolytics) and H2 blockers 31 % and proton pump inhibitors 15 % . Irrational use of any drug is not permitted. Many of the antipyretic given as a fixed dose combination with other potent non steroidal anti inflammatory drugs. Though our objective did not focus on each component and its effects it is essential to mention here that many studies have proved the misuse of antipyretics which may cause serious liver injury and misuse of anti ulcer drugs which may disrupt normal gastric physiology, induce deficiency of minerals like calcium and may also cause alteration in drug absorption .Percentage of injections used is comparatively higher in our study when compared with few other studies. Many times single dose of antibiotic or multi

vitamins are given probably so as to meet the patient demand.

CONCLUSION

Our study reflects considerable level of irrationality in prescribing practice. Despite the availability of essential medicines and standard treatment guidelines for specific illness, practice of which is not adopted. This needs prompt preconisation by the

government. All the steps must be taken at all levels of health care to train the practioners to use the drugs according to the patient need. General public also must be educated to curtail polypharmacy .Regarding costing of medicines every step taken by the legislation to promote generic drug is the most promising approach and should be done without further time lag.

REFERENCES

1. Binu Mathew Assessment of drug prescribing practices using who prescribing indicators in a private tertiary care teaching hospital. International Research Journal for Inventions in Pharmaceutical Sciences; Vol 1 (2), 26-31.(2011.)
2. Haldar D, Naskar TK, Sarkar A Prescribing and dispensing pattern: Implication in the right of access to essential medicine. The Health.; 2(4): 143-47.(2011)
3. Kishore.J, National Health Programs of India.6th edition. New Delhi. Century publications; ; p370.(2006)
4. Cheraghali AM, Nikfar S, Behmanesh Y, Evaluation of availability, accessibility and prescribing pattern of medicines in the Islamic Republic of Iran. World Health Organisation (Eastern Mediterranean Regional Office).WHO ;10:406-15.(2004)
5. Erah PO, Olumide GO, Okhamafe AO. Prescribing practices in two health care facilities in Warri, Southern Nigeria: A comparative study. Tropical Journal of Pharmaceutical Research. ;(2):175-82.(2003)
6. Oreagba IA, Olayemi SO, Mabadeje AFB Assessment of rational prescribing of antihypertensive drug combinations in Lagos University Teaching Hospital Nigerian Journal of Health and Biomedical Sciences; 3: 8-11.(2004)
7. UpadhyayDK,PalainS,ShankarRational drug prescribing and dispensing in tertiary care hospital of western Nepal. J Inst Med.; 30(2):33- 38.(2008)
8. The selection of Essential drugs. Report of the WHO committee. Geneva WHO 1996
9. Ramsay le.Bridging gap between clinical pharmacology and Rational Drug Prescribing.Br.J.Clinical pharmacology-(35) 575-576.(1993).
10. SekharanGopalakrishnan, ParasuramanGaneshkumar AjithaKatta. Assessment of prescribing practices among urban and rural general practitioners in Tamil Nadu. Indian J Pharmacol. May-Jun; 45(3): 252–257.(2013).