ORIGINAL ARTICLE

DRUG UTILIZATION PATTERN IN ORAL MEDICINE DEPARTMENT OF SAVEETHA DENTAL COLLEGE, TAMIL NADU, INDIA

Pratiti Datta[1], Pratyay Pratim Datta[2]

Author's Affiliations: [1]BDS Student, Saveetha Dental College; [2]Assistant Professor, Pharmacology, Gouri Devi Medical College, Durgapur, West Bengal, India
Correspondence: Dr Pratyay Datta Email: pratyaypratimdatta@gmail.com

ABSTRACT

Introduction: Drug utilization study helps to understand the pattern of drug use in different set up. Very limited numbers of drug utilization pattern studies have been conducted in dental colleges in India. The present study was done to find out the drug utilization pattern of the oral medicine department of a dental college in India.

Methodology: The study was conducted among the out patients in the oral medicine department of Saveetha Dental College of South India from May to June, 2014. The different drugs prescribed, average number of drugs per prescription, percentage of prescription having injectable drugs, percentage of prescriptions having antibiotics prescribed, percentage of prescriptions having analgesic prescribed, percentage of drugs prescribed from generic name were analyzed in SPSS (version 16.0).

Results and Discussion: Total 278 drugs were prescribed for 300 prescriptions having 0.93 average numbers of drugs per prescription. Only 10.97% drugs were prescribed in generic name. 42% prescriptions had antibiotics and 21.67% prescriptions had analgesics. Main antibiotics prescribed were metronidazole, amoxicillin, azithromycin. Main analgesics prescribed are diclofenac, paracetamol and aceclofenac. Further study in larger sample size is required to have an overall idea about the pattern of prescription of the drugs by the dentists. Beside dentists should be motivated to prescribe drugs by generic name as well as they should be trained in rational use of medicine.

Key words: Drug utilization, oral medicine, antibiotics, analgesics

INTRODUCTION

Drug utilization research was defined by World Health Organization in 1977 as "the marketing, distribution, prescription and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences". Drug utilization studies aims to evaluate factors related to the prescribing, dispensing, administering and taking of medication, and its associated events.[1] Drug utilization study helps to understand the pattern of use of drugs in different set up after the drug is approved by the proper regulating authority. It is very closely related to the pharmacoeconomic impact on the society as a whole. Dentistry is the study, diagnosis, prevention, and treatment of diseases, disorders and conditions of the oral cavity, especially the teeth, and to an extent related conditions in the maxillofacial (jaws and face) area.[2]

Dentists are modern medicine practitioners. But, very limited studies have been conducted on the drug utilization pattern by dentists. In this background the present study was undertaken to study the drug utilization pattern of the oral medicine department of a dental college in India.

MATERIALS AND METHODS

Study area: The study was conducted in Saveetha Dental College and Hospital, Chennai, India.

Study period: The study was done from May, 2014 to June, 2014.

Study population: The patients attending outdoor of oral medicine Department, Saveetha Dental College were included in the study population. The prescriptions were analyzed. Total 300 patients were included in the study.

Inclusion and exclusion criteria: The prescriptions were taken only for those patients whose treatment was done in oral medicine department without referral to other department. Informed consent was taken from the patients and those who gave informed consent, only those patients were included in the study. If the patient was referred to other department for treatment and if the patients were not agreed to give informed consent then those patients were excluded from the study.

Permission was taken from Institutional Ethics Committee before conducting the study.

Study parameters: Parameters for drug utilization study were taken. The parameters used in this study are:

- Drug prescribed
- Average number of drugs per prescription
- Percentage of drugs prescribed in generic name
- Percentage of prescriptions having antibiotics prescribed
- Percentage of prescription having injectable drugs prescribed
- Percentage of prescriptions having analgesic prescribed

After collection of data, it was compiled in Microsoft Excel sheet and after verification the data was copied to SPSS (version 16.0). Then the whole data was analyzed in SPSS (version 16.0).

RESULTS

Table 1 shows the drug utilization parameters of the study population. Total 300 prescriptions were checked. Total number of drugs prescribed was 278; so average number of drugs per prescription was 0.93. 42% prescriptions had antibiotics prescribed. 21.67% prescriptions had analgesic prescribed. 0.67% prescriptions had injectable drugs prescribed. Only 10.97% drugs were prescribed in generic name.

Table 2 shows the different antibiotics prescribed. Among the antibiotics prescribed, most common was metronidazole (29 prescriptions). Azithromycin was prescribed to 24 patients and Amoxicillin was prescribed to 22 patients. Other prescribed antibiotics were Ciprofloxacin (4 patients), Levofloxacin (14 patients), Amoxicillin + Clavulanic acid (5 patients), Cefixime (15 patients) and Roxithromycin (13 patients).

Table 3 shows the distribution of analgesics prescribed to the study population. Diclofenac was the most common antibiotics (prescribed to 18 patients) followed by paracetamol (prescribed to 17 patients) and aceclofenac (prescribed to 15 patients). Other analgesics prescribed were Ibuprofen (prescribed to 9 patients) and Nimesulide (prescribed to 4 patients).

Except antibiotics and analgesics other drugs prescribed were H_2 blockers (Ranitidine 12, Famotidine 8 patients), Proton pump inhibitors (Pantoprazole 17 patients, Omeprazole 10 patients, Rabeprazole 8 patients). Other drugs were prescribed to 34 patients.

Table 1: Drug utilization parameters in the studied prescriptions

Parameter		Freq.
Drugs per prescription	Total number of prescription studied	300
	Total number of drugs prescribed	278
	Average number of drugs per prescription	0.93
Percentage of prescription having antibiotic prescribed	No. of prescription having antibiotic prescribed	126
	%age of prescription with antibiotic prescribed	42%
Percentage of prescription having analgesic prescribed	No. of prescription having analgesic prescribed	65
	%age of prescription with analgesic prescribed	21.67%
Percentage of prescription with injectable drugs prescribed	No. of prescription having injectable drugs	2
	%age of prescription with injectable drugs	0.67%
Percentage of drugs prescribed in generic name	Total number of drugs prescribed	164
	No. of drugs prescribed in generic name	18
	%age of drugs prescribed in generic name	10.97%

Table 2: Distribution of antibiotics:

Antibiotic	Prescription
Ciprofloxacin	4
Levofloxacin	14
Amoxicillin	22
Amoxicillin + Clavulanic acid	5
Cefixime	15
Azithromycin	24
Roxithromycin	13
Metronidazole	29

Table 3: Distribution of analgesics:

Analgesic	No. of prescription
Diclofenac	18
Aceclofenac	15
Ibuprofen	9
Paracetamol	17
Nimesulide	4

DISCUSSION

A prescription reflects the attitude of a doctor towards a particular disease or towards a particular drug or towards a particular patient. Prescription pattern varies from doctor to doctor. Drug utilization pattern study requires analysis of type of drugs prescribed for a particular disease or from a particular department. This type of study is useful for obtaining information about drug use pattern.[3]

In the present study average number of drugs prescribed per prescription was 0.93. In a study by Jayanthi et al, average number of drugs prescribed from paediatric dentistry department of an Indian medical college was 0.52 which is much less than the findings of the present study.[4] Like the study by Jayanthi et al, in the present study also main prescribed drugs were antibiotics and analgesics.[4]

The prescription of drugs by generic name is very less in the present study. This increases the cost spent by the patients as well as the health system. The dentists should be sensitized about this and they should be motivated to prescribe drugs by generic name. The present study was an initiative to have an idea about the main drugs prescribed from the oral medicine department of a dental college. Further study in greater detail on a larger population is required and the dentists should be sensitized about the rational prescription of medicine.

REFERENCES

1. Helena Gama. Drug utilization studies. Arquivos De Medicina, 2008; 22(2): 69-74.
2. Glossary of Dental Clinical and Administrative Terms. American Dental Association. Retrieved 1 February 2014
3. Lamichhane DC, Giri BR, Pathak OK, Panta OB, Shankar PR. Morbidity profile and prescribing patterns among outpatients in a teaching hospital in Western Nepal. MJM 2006 ; 9(2):126-33.
4. Jayanthi MK, Sushma NV. Drug utilization pattern and pharmacoeconomic study in paediatric dentistry at a tertiary hospital. Int J Pharm PharmSci 2014; 6(2): 70-72