

DRUG UTILIZATION STUDY IN DERMATOLOGY IN A TERTIARY HOSPITAL IN DELHI

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Abstract : The present study was undertaken to describe patterns of dermatological drug utilization in a tertiary hospital in Delhi by measuring WHO delineated drug use indicators. Six hundred and six prescriptions of dermatology out-patients were analyzed and the data collected were used to evaluate the following drug use indicators : average number of drug per prescription, average consultation time, percentage of drugs prescribed by generic name, percentage of encounters with an antibiotic prescribed, percentage of encounters with an injection prescribed and percentage of drug prescribed from the essential drugs list or formulary. The average number of drugs per prescription \pm SD was found to be 2.6 ± 1.2 , average consultation time \pm SD was 4.4 ± 2.6 minutes, percentage of drug prescribed by generic name was 6.98, percentage of encounters with an antibiotic and injection prescribed were 46.86 and 6.76 respectively and 23% of the total drugs prescribed were from Delhi State Essential Drugs Formulary.

Key words : WHO drug use indicators dermatology prescribing pattern

INTRODUCTION

The importance of modern therapeutic agents for diagnostic and curative purpose and their contribution to healthcare requires no emphasis. However, it is important to realize that every medicine is

potentially hazardous (1). The inappropriate use of drugs represents a potential hazard to patients and an unnecessary expense (2). This necessitates a periodic review of patterns of drug use in a healthcare facility to ensure safe and effective use of drugs. To improve the overall drug use, especially in

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developing countries, international agencies like World Health Organization (WHO) and International Network for Rational Use of Drugs (INRUD) have applied themselves to evolve standard drug use indicators. The main purpose of drug use indicators developed by WHO is to define a limited number of objective measures that can describe the drug use situation in a country, region or individual health facility. Such measures, or indicators, will allow health planners, managers and researchers to make basic comparisons between situations in different areas or at different times. Also, when an intervention is undertaken to improve aspects of drug use, the indicators can be used to measure its impact. Indicators can also serve as simple supervisory tools to detect problems in performance by individual providers or health facilities (3). Keeping this in mind the present study was planned to determine patterns of drug use in dermatology by measuring prescribing indicators and one patient care indicator (average consultation time) as laid down by WHO.

METHODS

The study was conducted at dermatology OPD of All India Institute of Medical Sciences (AIIMS). Data were collected prospectively by one of the authors (R.M.) from the out-patients visiting the OPD from 9:00 AM to 1:00 PM twice a week during the period of October to December, 1999 and January, 2000. Information about name, age, sex, indications and drugs prescribed was obtained from the prescription and recorded on a specially designed form by the investigator who used to sit with the

dermatology consultant during the OPD hours. The consultation time, which was the time the dermatologist spent with the patient in the process of consultation, examination and prescribing, was noted by the investigator using a stop-watch and recorded on the form. The study base consisted of 606 prescriptions received by 453 patients, selected consecutively, during the course of the study. The data collected was then used to calculate average consultation time, average number of drugs per encounter, percentage of drugs prescribed by generic name, percentage of encounters with an antibiotic prescribed, percentage of encounters with an injection prescribed and percentage of drugs prescribed from the Delhi State Essential Drugs Formulary (4).

RESULTS AND DISCUSSION

Six hundred and six prescriptions containing 1576 drugs were audited. Average number of drugs per prescription was found to be 2.6 ± 1.2 . The distribution of the number of drugs per prescription is given in Table I. Most of the prescriptions contained 2 or 3 drugs, which showed a remarkable restraint on prescribing and an awareness to avoid polypharmacy. There were a small percentage of prescriptions (1.82) where no drugs were prescribed and only investigations were ordered or a surgical procedure was advised. Average consultation time was found to be 4.4 ± 2.6 minutes with a range of 0.7 to 18.5 minutes which appeared to be satisfactory. Brand versus generic prescribing was 93.02% versus 6.98% that could result in more expensive prescribing because usually the

branded drugs are costlier. Moreover brand names can create confusion during dispensing. Similar studies (5, 6) have reported average number of drugs per prescription as 2.79 and 3.36 and percentage of drugs prescribed by brand name as 65% and 81% respectively. Antibiotics are amongst the most important, but commonly overused or abused and costly forms of therapy. In India the prevalence of use of antimicrobial agents varies from 24–60% (7, 8).

TABLE I: Number of drugs prescribed per prescription.

<i>Number of drugs per prescription</i>	<i>Number of prescriptions (%)</i>
0	11 (1.82)
1	103 (17)
2	199 (32.84)
3	155 (25.58)
4	91 (15)
5	38 (6.27)
6	7 (1.16)
7	2 (0.33)
Total	606 (100)

In the present study the number of encounters with antibiotics were 423 for 284 prescriptions, an average of 1.49 antibiotics per prescription. Out of 423 antibiotics prescribed, 254 (60.05%) were for topical use and remaining 169 (39.95%) for systemic use. The percentages of encounters with an antibiotic and injection prescribed were 46.86 and 6.76 respectively. Another study recently conducted in departments other than dermatology in AIIMS and Safdarjung

hospital (9) showed less number of antibiotics and injections than our study. However, in the present study prescriptions written only by consultant dermatologist were analyzed who generally attend to severe and complex cases with underlying secondary infections requiring antimicrobial therapy and in certain cases administration of drugs through injections. The percentage of drugs prescribed from Delhi State Essential Drugs Formulary, which we had used in this study, was 23%. This low figure needs to be increased to provide cheaper and safer treatment.

Since drugs form a very important point of contact between the healthcare provider and user, a study of prescriptions should help in assessing the quality of healthcare services. The WHO drug use indicators do not measure all the dimensions of the appropriateness of pharmaceutical care. However, these indicator studies can be used to quantify basic and important aspects of current treatment practices and to act as a means of prescriber feedback regarding his/her prescribing behaviour and to assess and rectify any shortcomings.

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