International Standard Serial Number (ISSN): 2249-6807

International Journal of Institutional Pharmacy and Life Sciences 5(1): January-February 2015

INTERNATIONAL JOURNAL OF INSTITUTIONAL PHARMACY AND LIFE SCIENCES

Pharmaceutical Sciences

Research Article……!!!

Received: 20-01-2015; Revised: 24-01-2015; Accepted: 25-01-2015

A STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICE ON GENERIC DRUGS AMONG INTERNS AND POST GRADUATES AT A TERTIARY CARE HOSPITAL

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Keywords:

Generic drugs, Brand name, Knowledge and Practice

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ABSTRACT

Aim: To assess the awareness about the generic drugs and to determine the attitude and practice towards generic drugs. **Methodology:** 111 study subjects of either gender were included in the study and they were asked to answer a structured questionnaire, regarding awareness, attitude and practice of generic drugs. **Results:** Participants included were postgraduates (64.86%) and interns (35.14%), female were 60.36% and male were 39.64%. 90.99% had knowledge about generic drugs, 69.37% knew about generic substitution practice. 81.98% knew that generic drugs are cheaper than brand ones, 9.91% did not know about the price difference and 0.9% thought they were similar. 30.63% said they would prescribe generic all the time, 59.6% sometimes and 9.91% said they would not prescribe generic drugs. 73% participants knew that our hospital posses generic drug store. 32.43% were concerned about the efficacy, 28.83% about the quality of generic drugs compared brand ones. 27.03% said they always give options to their patients between brand and generics, 54.95% would give sometimes and 18.02% said would not give options. **Conclusion:** Participants prefer more of brand drugs; because they were more concerned about their quality and efficacy of generic drugs. Proper awareness in physicians about the generic prescription practice may improve the patient compliance by reducing the economic burden to the patients, especially in chronic illnesses.

INTRODUCTION

US Food and Drug Administration (FDA) defines generic drug as "a drug product that should have the same active ingredient, strength, dosage form, route of administration, quality, performance characteristics, and intended use as the brand-name drug. When a generic drug product is approved, it has met rigorous standards established by the FDA with respect to identity, strength, quality, purity, and potency.[1] When it comes to price; there is a big difference between generic and brand name drugs. On average, the cost of a generic drug is 20 to 80 percent lower than the brand name product.[2] Generic manufacturers are able to sell their products for lower prices because they are not required to repeat the costly clinical trials of new drugs and generally do not pay for costly advertising, marketing, and promotion. In addition, multiple generic companies are often approved to market a single product; this creates competition in the market place, often resulting in lower prices.

Both in developed and developing countries, health authorities, governments and health insurance agencies have suffered from pharmaceutical expenditures. Substitution of generics for brand-name drugs might be an alternative way to reduce drug expenditure. Today, nearly 8 in 10 prescriptions filled in the U.S. are for generic drugs. In 2012 generic drug savings study done by **Intercontinental Marketing Services** Institute (IMS) for Healthcare Informatics showed that: $192.8 billion saved in calendar year 2011. Savings from generic medicines, those that have entered the market since 2002, continue to increase exponentially, totaling $481 billion over the past 10 years. [3, 4] However, in developing countries like India the generic drugs are not as widely used as they are in the west and also the awareness about generic drugs both in prescribers and in patients are not well documented. In this regard the present KAP (Knowledge, Attitude and Practice) study is take-up to generate a useful data on awareness about generic drugs among Post graduates and Interns, and to propose methods of promoting the use of generic drugs.

MATERIALS AND METHODS

The present study was a cross-sectional study carried out involving Interns and post graduate students of KIMS (Kempegowda Institute of Medical Sciences) Hospital and Research Centre, a tertiary care teaching hospital. After approval and clearance from the Institutional Ethics Committee, 111 participants of both gender (21-40yrs) and willingness to give the written informed consent were included into the study by the investigator during July - September 2013 by purposive sampling method. After explaining about the nature and purpose of the study, the study subjects were interviewed by using structured **questionnaire**,

to assess the awareness about the generic drugs and to determine the attitude and practice towards generic drugs. The appropriate instructions about filling questionnaire were given.

Analysis of the data: Data collected were analyzed statistically using descriptive statistics namely mean, median and standard deviation for quantitative variables. Results were depicted in the form of percentages and graphs.

RESULTS

The demographic data of the study subjects is presented in the **Table-1**. Out of 111 participants, 44 (39.64%) were male and 67 (60.36%) were female and the mean age was 19.23 (21-40 yrs). **Figure-1** summarizes the educational status. Among the study subjects 39 (35.14%) were interns and 72 (64.86%) were post graduates. Out of 111 participants 101 (90.99%) had knowledge about generic drugs and 77 (69.37%) knew about generic substitution practice. 91(81.98%) knew that generic drugs are cheaper than brand ones, 38 (34.23%) thought 50-75% cheaper, 45 (40.54%) thought 25-50% cheaper and 13**(**14.41%) thought 10-25% than brand drugs **(Figure-2)** 11 (9.91%) did not know about the price difference, 0.9% thought they were similar. 30.63 % said they would prescribe generic all the time, 59.6% sometimes and 9.91% said they would not prescribe generic drugs. 32.43% were concerned about the efficacy, 28.83% about the quality of generic drugs compared brand ones. 27.03% said they would give always options to their patients between brand and generics, 54.95% would give sometimes and 18.02% said would not give options.

TABLE 1: AGE & GENDER DISTRIBUTION (n=111)

Age group	Male	Female	Total
21-30	41(36.93)	64(57.65)	105(94.59)
31-40	3(2.70)	2(1.80)	5(4.50)
>40	0	1(0.09)	1(0.09)
Total	**44(39.63)**	**67(60.36)**	**111(100)**
Mean ± SD	25.68±2.93	25.62±3.70	25.64±3.10

FIGURE 1: EDUCATIONAL STATUS

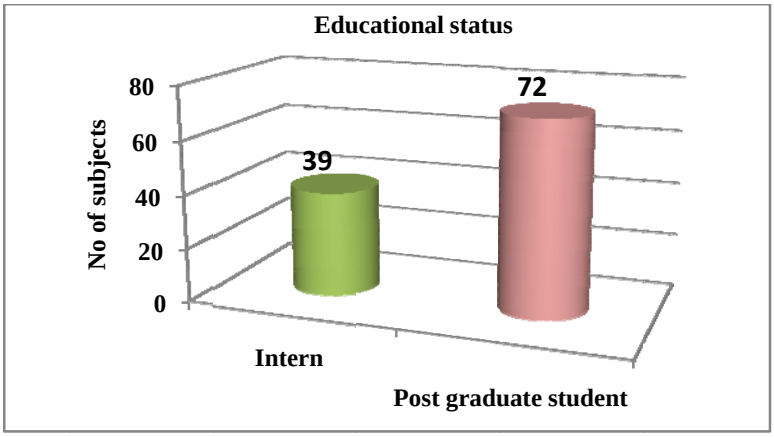
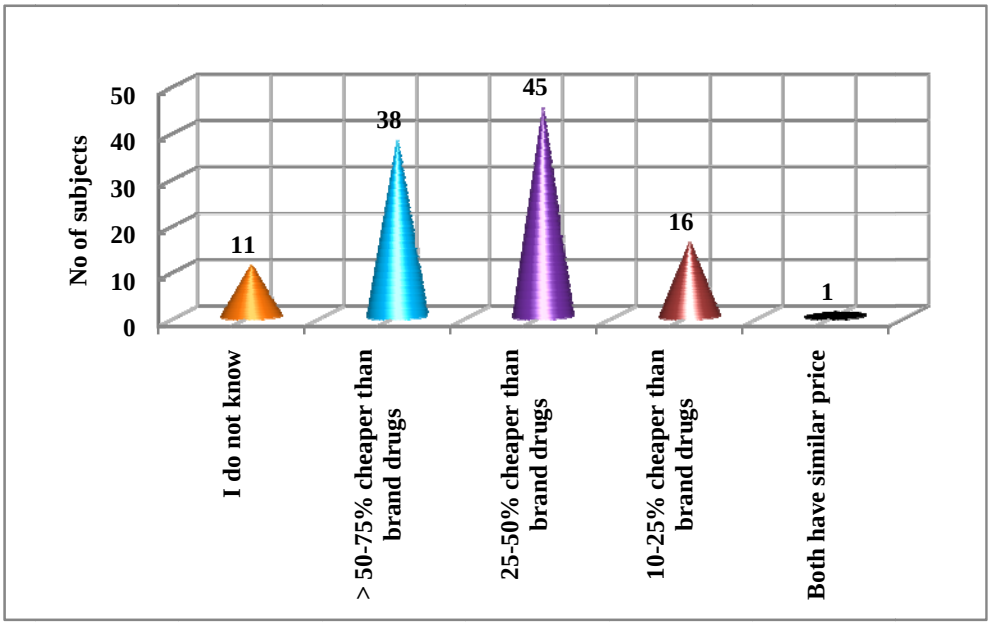


FIGURE 2: PRICE DIFFERENCE BETWEEN GENERIC DRUGS AND BRAND DRUGS



DISCUSSION

Health care expenditure is rising in most health care systems in the world and the cost of prescribed medicines is an increasingly important concern.[5] Around one third of the world's population encounters difficulties in accessing medications due to high prices and this is rising to 50% in the developing countries.[6] WHO says 3.2% Indians will fall below the poverty line because of high medical bills. 39 million Indians are pushed to poverty because of ill health every year.[7] Since physicians have a key role in prescribing and management of drug costs, they can reduce the costs of prescriptions written by them by using generic drugs. As Interns and post graduate students are budding physicians, we have conducted this study in these study subjects, to assess the knowledge, their approach and practice towards generic drugs. In the current study, most of the study subjects were aware of the generic drugs. Similar observations were made in other studies.[8, 9, 10] 91(81.98%) knew that generic drugs are cheaper than brand ones and 9.91 % subjects did not know the price differences. Even though majority of the subjects (81.98%) knew that generic drugs are cheaper, only 30.63% study subjects said that they would prescribe generic drugs all the time. In other studies generic drug prescribing varies between 12 to 24%.[11, 12] In our study though study subjects have enough knowledge, they have their opinion on generic drugs. They believed that generic medicines are inferior to brand medicines on efficacy (32.43%) and quality (28.83%). This is comparable to study done by G.N. Chua et al. on survey exploring knowledge and perceptions of general practitioners towards the use of generic medicines in the northern state

of Malaysia.[13] In a recent study published in the Journal of the American Medical Association, researchers compared generic and brand name drugs for the treatment of heart and artery disease. The study included beta-blocker, diuretics, statins and warfarin – some of the most commonly prescribed medications worldwide. Thirty eight of the studies were randomized controlled trials indicative of high reliability. In these studies, 36 of 38 found no real difference between generic and brand.[7] For FDA approval of generic drug a generic-drug manufacturer must conduct bioequivalence studies and should show that the generic drug has a pharmacokinetic profile similar to that of the brand-name drug and also that, the 90% confidence intervals for the ratio of the mean response of the area under the plasma concentration curve (AUC) and maximum drug concentration (Cmax) of its product are within 80–125% of those of the brand-name drug, with a significance level of $P < 0.05$. Stricter bioequivalence standards were recently recommended but have not yet been endorsed by the FDA. [1, 14] In spite of the major advantages by generic drugs, many conflicts have already been described in terms of their use like;[6] lack of usage guidelines for their use, lack of knowledge among healthcare professionals, weak encouragement for their prescription by medical practitioners, marketing pressure from the pharmaceutical industry, lack of knowledge and negative beliefs among consumers regarding their use, limited availability of these products in chemists etc. With few interventions we might successfully promote physicians to alter their prescribing practice and can encourage generic drug usage like; peer review meetings can increase generic prescribing, practice comparison feedback, pharmaceutical adviser, at least by compulsory use of generics in critical diseases and for WHO list of essential medicines, educating and motivating the prescribing physicians to change their prescribing behavior, increasing the availability of generic drugs in the market and making it available in all medicine shops.[5,7,15]

A number of developing countries including India have made use of compulsory licensing or government use orders to enable the supply of more affordable generic drugs in recent years. Recently, some state namely Gujarat, Rajasthan, Mumbai etc. has already taken initiative to make available affordable generic drugs for the public by opening a number of medical stores for generic drugs and branded generics.[7] Also they have created public awareness regarding generic usage. If this is extended to other states and if available at subsidized rates, it will be a great support to the sale of generic drugs in the domestic market and thus, would benefit consumers.

CONCLUSION

Though majority of the participants are aware about the generic drug prescribing, they prefer more of brand drugs due to the insufficient information and knowledge about generic drugs. Therefore, healthcare providers should be better educated about generic drugs to promote more rational use of generic drugs, which will improve the patient compliance by reducing the economic burden to the patients, especially in critical and chronic diseases.

ACKNOWLEDGEMENT

We are grateful to all the participants from KIMS hospital who contributed to this study.

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