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**Research Article** 

# An observational comparative study of cost between branded medicines and generic medicines

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#### **ABSTRACT**

**Background:** Same drug can be sold for different prices under different brand names due to various reasons. Branded medicine is the original product that has been developed by a pharmaceutical company and generic medicine is a copy of the original branded product, marketed after the expiry date of the patent and hence supposed to be of low cost as compared to their branded versions. The objective was to compare the costs of various branded and generic medicine and to ascertain the rationality of emphasizing generic versus branded prescription.

**Methods:** Prices of 50 commonly used branded and generic medicines available as both branded and generic forms and in same concentration, dosage form and combination were selected and the percentage difference in the mean cost of generic and branded medicines was calculated.

**Results:** The mean cost of 26 generic medicines out of the selected 50 medicines was higher than their branded versions. Mean cost of 20 branded medicines was higher than generic ones, and cost of 4 medicines was approximately same. Percentage difference in the mean costs of branded and generic medicines varied from <10% to >70%.

**Conclusions:** Most of the drugs available in the market have brand names whether they are branded or generic medicines. Hence, doctor should write a cheapest known brand with the name of the generic salt in bracket so that the patient can buy another if that brand is not available. Furthermore, the Drug Controller of India should release a website where every doctor should be able to find the cheapest and approved drugs in the market.

**Keywords:** Generic medicine, Branded medicine, Healthcare professionals, Pharmaceuticals and pharmacies

# INTRODUCTION

Prescribing branded medicines by health professionals is thought to be one of the major causes of the high cost of medicine. The cost incurred by the manufacturer in drug research, drug production, its storage, marketing, and distribution, etc., is directed to the customer. Hence, the same drug can be sold for different prices due to various reasons. For same medicine, the difference in cost between branded and generic product varies from < 2-fold to >100-fold. There are two concepts to be understood here, one is generic vs. patented drugs and the other is a drug's "brand name" versus "non-proprietary name" or generic

name.<sup>3</sup> Branded medicine is the original product that has been developed by a pharmaceutical company.<sup>4</sup> The company is given sole rights of manufacture and distribution of medicine for a certain period of time i.e. known as to have a patent on it. During this period, no one else can produce the same drug. And this is also the reason for the pharmaceutical for being the most trusted type of brand of that particular medicine. Generic medicine is a copy of the original branded product, marketed after the expiry date of the patent or other exclusive rights and hence supposed to be of low cost as compared to the branded versions.<sup>4,5</sup> It contains the same drug in the same quantity as a brand name medicine. Both branded and generics are manufactured by

confirming to international standards. Generics can be sold by different brand name and may contain different fillers, binders and lubricants and that give them a different color, shape, taste, smell, etc. Hence, generic can be marketed under non-proprietary name or as a branded generic. This enables the manufacturer to market the product in a way similar to the proprietary product.<sup>6</sup>

Non-proprietary name is the name for the active ingredient in the medicine that is decided by an expert committee and is understood internationally.<sup>7</sup>

When it is said that doctors should prescribe generic drugs, it means that they should prescribe drugs manufactured by other companies after expiry of the patent of the parent drug of the innovator company. Very often, generic prescribing is misconceived as prescribing by a drug's generic name or non-proprietary name.<sup>3</sup>

The unethical promotional practices to get more prescriptions by the doctors by the pharmaceuticals make the drugs unaffordable to the common man as this adds to the cost of the medicine. The importance of generic prescribing has been emphasized, primarily to reduce the cost of drugs. With this background a study was planned with the aim to compare the cost of various commonly used branded medicines and generic medicines and to ascertain the rationality of emphasizing generic versus branded prescription.

# **METHODS**

An observational study was carried out in the Department of Pharmacology of a tertiary care teaching hospital in Udaipur, after taking permission from institutional ethical committee. Prices of different branded and generic drugs were compared with the help of Indian Drug Review January 2014, ref Rx July-October 2013, brochures of pharmaceuticals and pharmacies. Commonly used drugs available as both branded and generic forms and in the same concentration, dosage form, and the combination, belonging to different classes were selected. 50 medicines belonging to different classes such as non-steroidal anti-inflammatory drug, antacids, anti-hypertensives, anti-diabetics, antibiotics, drugs used for bronchial asthma and cough syrups, etc., were included for comparison. Few FDCs and topical preparations of antiseptics and antifungal, hematinics calcium and vitamin preparations were also included. The brand with the highest price and lowest price available were taken into consideration. Mean of all the prices available, of branded medicine and generic medicine, was calculated, and the percentage difference in the mean costs of generic and branded medicines was calculated.

## RESULTS

A total of 50 medicines were selected for analysis. Of 50 medicines 18, (36%) branded and generic medicines were

having <10% difference in their cost; of which 9 (50%) generics and 5 (27.78%) branded were costlier than their counter versions and 4 (22.22%) were approximately of same cost

Totally, 16 (32%) medicines had 10-35% difference in their cost; of which 9 (56.25%) generics and 7 (43.75%) branded were costlier.

The percentage difference was between 35% and 70% in 14 (28%) medicines of which 8 (57.14%) generics and 6 (42.86%) branded were costlier.

Two branded medicines were costlier than their generic versions having >70% difference in their cost.

The mean cost of 26 (52%) generic medicines of the selected 50 medicines was higher than their branded versions. Mean cost of 20 (40%) branded medicines was higher than generic ones, and cost of 4 (8%) medicines was approximately same. Percentage difference in the mean costs of branded and generic medicines varied from <10% to >70% more precisely ranging from 0.50% to 79.49% (Figures 1 and 2).

### DISCUSSION

It is evident by the results after completion of the study that the mean cost of 52% of generic medicines were found to be more than the mean cost of branded medicines which is inconsistent with previous findings. <sup>10</sup> This could be because of competition among producers when generic drugs enter the market and to overcome this, their branded versions

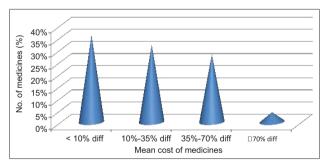


Figure 1: Distribution of total number of medicines according to percentage difference in their mean cost.

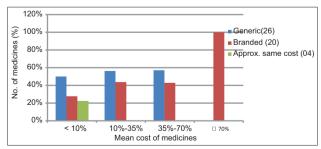


Figure 2: Distribution of branded and generic medicines according to percentage difference in their mean cost.

are also sold at lower prices. Generic prescribing has been emphasized mainly to reduce the cost of drugs. Until the amendments in the Indian Patent Act in March 2005, India was following process patent system but after becoming a part of the global treaty India has moved to product patent system. <sup>11</sup> Before this Indian pharmaceutical industry flourished and became big supplier of generic medicines. Because of process patents only, in 2002 India was the world's largest producer of generic medicines. <sup>11</sup>

Mean cost of 40% of branded medicines were found to be higher than generic medicines. Generic medicines are cheaper in comparison to branded medicines because there is no need to make investments in research and development as in the case of new drugs. The prevailing fierce competition also makes the manufacturers to keep low prices. 12 Earlier the branded medicines were manufactured by multinational pharmaceuticals and large Indian pharmaceutical companies and therefore usually expensive.<sup>13</sup> They were strongly but unethically promoted through doctors. Practice of bribing doctors for getting more prescriptions is well known; though unacceptable fact and such promotional cost add to the retail prices i.e. maximum retail price (MRPs) of the medicines. Negligence of the product patents for pharmaceuticals was our strength till the amendment of Indian Patent Act in 2005 which resulted in growth of generic pharmaceutical industries thus making drugs available at low cost.11 Recently, in order to check the doctor-pharmaceutical connection and unethical marketing practices Union government and regulatory bodies appear to be serious. Medical Council of India has directed doctors, hospitals, and medical colleges to prescribe by generic names as far as possible as they are thought to be more affordable. An authoritative decision dated January 21, 2013 directed to the principals of medical colleges, director of hospitals and presidents of all state medical councils in which the MCI has said that every physician should, as far as possible, prescribe drugs with generic names and ensure that there are a rational prescription and use of drugs and all doctors registered under the MCI act have been asked to abide by the directive.9 Concern grew about the fate of our pharmaceutical industry after the amendment.<sup>14</sup> There shall be no price hike due to new patent regime. The fear that prices of medicines will spiral is unfounded. 15 Now the act allows only two types of generic drugs in Indian market: off-patent drugs and generic versions of drugs patented before 1995. Hence, at present nearly 97% of drugs manufactured in our country are now off patent so Indian pharmaceutical industry will not be affected by product patent regime. 16 These cover all the lifesaving drugs as well as medicines of daily use for common ailments. 14 Indian Union Minister for Commerce and Industry, Sri Kamal Nath, assured that "the prices of medicines will not shoot up due to Patents, because of the strong safeguards and checks and balances." Further, he added "I must also repeat the point often cited that 97% drugs in the market and 100% of all essential drugs are not covered by patents."11,17

Percentage difference in the mean costs of branded and generic medicines varied from 0.50% to 79.49%. Actually

almost all the drugs produced in India are generic medicines (generic equivalents) under different brand names. The prices of them may vary and are not controlled by the doctors. MRP is decided and permitted by the government.<sup>18</sup>

Now instead of chasing doctors pharmaceuticals provide generic medicines to the pharmacies at very cheap rates with MRPs written as allowed by the government, and now these pharmacies have free choice of selling the drug at their own cost.

### CONCLUSION

Facts revealed after the completion of this study are suggestive of that the onus for cost reduction, from the point of view of drug selection, lies with the doctors by prescribing the cheapest available drug and include the generic names of the drug in parenthesis, in case that particular brand is not available. A website should be release by the Drug Controller of India where every doctor can find out cheapest and approved drugs.

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Ethics Committee

# REFERENCES

- Jana S, Mondal P. Pharmacoeconomics: the need to sensitize undergraduate medical students. Indian J Pharmacol. 2005;37(5):277-9.
- Lothium PW, Katzung BG. Basic and Clinical Pharmacology. 12th Edition. New Delhi: Tata McGraw Hill; 2012: 1142.
- 3. Thakkar KB, Billa G. The concept of: generic drugs and patented drugs vs. Brand name drugs and non-proprietary generic name drugs. Front Pharmacol. 2013;4:113.
- Generic medicines and Branded medicines. Available at http://www.myvmc.com/treatments/generic medicines and branded medicines. Accessed 15 October 2014.
- Generic Drugs, Available at http://www.who.int/trade/glossary/story034/en/WHO. Accessed 15 October 2014.
- King DR, Kanavos P. Encouraging the use of generic medicines: implications for transition economies. Croat Med J. 2002;43(4):462-9.
- Guidance on INN, WHO Available at http://www.who. int/medicines/services/inn/innguidance/en/index.html. Accessed 15 October 2014.
- 8. Singhal GL, Kotwani A, Nanda A. Jan Aushadhi stores in India and quality of medicines therein. Int J Pharmacy Pharm Sci. 2011;3(1):204-7.
- 9. Mukherjee R. Prescribe generic drugs: MCI to doctors 2013. Available at articles.timesofindia.indiatimes.com/2013-01-27/india/36576717\_1\_generic-drugs-generic-medicines-generic-versions. Accessed 15 October 2014.
- Gautam CS, Bhanwra S. Pharmacoeconomics: sensitization of undergraduate medical students. Correspondence. Indian J Pharmacol. 2005;37(5):336.
- Poduct v. Process Patent under Indian Patent Law. Available at http://www.ssrn.com/abstract=1758064 poduct v. Process Patent under Indian Patent Law. Accessed 15 October 2014.

- 12. Dadhich A, Upadhyaya M. A review: exploring branded generic drugs by Indian pharmaceutical multinational companies as a new prospect. Pharmacophore 2011;2(6):271-5.
- 13. Ahire K, Shukla M, Gattani M, Singh V, Singh M. A survey based study in current scenario of generic and branded medicines. Int J Pharm Pharm Sci 2013;5(3):705-11.
- Dwivedi RK. Patent and Medicine: a Comparative Study. Available at http://ispub.com/ijtwm/7/1/10192. Accessed 15 October 2014.
- Nath K. Pharma and IT to Benefit, Yojana. March, 2005: 49-51.
- Rohit SR, Nilesh LB, Ravikiran KB, Pallavi MC, Pramod VK. The Indian pharmaceutical industry: evolution of regulatory system and present scenario. Int Res J Pharm. 2012;3(6):49-54.
- 17. Janodia M, Pandey S, Venkara RJ, Sreedhar D, Ligade V,

- Udupa N. Patents regime in India: issues, challenges and opportunities in pharmaceutical sector. Internet J Third World Med. 2007;7(1).
- Aggarwal KK. Generic drugs vs patented drugs vs branded drugs vs generic names of the drugs. Available at http:// www.blog.kkaggarwal.com/2013/02/generic-drugs-vspatented-drugs-vs-branded-drugs-vs-generic-names-of-thedrugs. Accessed 15 October 2014.

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