

Critical Analysis of Pharmaceutical Promotional literature of Antimicrobials : A Bangladesh Study

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ABSTRACT

Background: Pharmaceutical promotional activities are principally designed to influence physician's choice of medicine and promotional literature circulated by medical representatives are considered as an important tool of detailing which increases awareness and knowledge about promoted products and provides written reinforcement of verbal message provided by the medical representatives. But educational value of this material is questionable. Evidence showed that promotional literatures provided by pharmaceutical industry contain deviation and exaggeration, and there is intentional manipulation and misinterpretation of information. The purpose of the study was to analyze the quality of pharmaceutical promotional literatures featuring antimicrobial agents.

Materials and methods: This descriptive cross-sectional study was conducted in Bogura city on November 2017. Pharmaceutical promotional literatures were collected from three private practitioners of Bogura city of Bangladesh for one week period in November 2017. Total 79 literatures were analyzed.

Results: All reviewed promotional materials (100.0%) contained name of the active ingredient, trade name and detail information about license holder. Active ingredient per dosage formulation, approved dosage schedule, route of administration was mentioned in 87.4%, 70.9% and 92.4% of the reviewed promotional materials respectively. Indications, side effects, precautions and contraindications were mentioned in 93.7%, 46.8%, 39.3% and 43.1% respectively. There was no mentioning of issue of antimicrobial resistance in a single promotional literature. Regarding indications, 67.9% (74/79) promotional literatures matched with Bangladesh National Formulary (BDNF) and British National Formulary (BNF) while the percentage of side effects, precautions and contraindications of the promotional literature that matched with BDNF/BNF were 18.9% (7/37), 21.6% (8/31) and 29.4% (10/34) respectively.

Conclusion: Gross deviations were found in analyzed promotional literature. Regulatory efforts to control pharmaceutical promotional activities as well as physicians' awareness about deceptive promotional materials would be helpful for the containment of antimicrobial resistance in Bangladesh.

KEY WORDS

Antimicrobials; Drug advertisement; Drug promotion; Pharmaceutical promotion; promotional literatures.

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INTRODUCTION

The rapid emergence of antibiotic resistance poses one of the biggest threats to global health.¹ Over-use and inappropriate prescribing as well as lack of new drug development by the pharmaceutical industry attribute to resistance crisis and world is on the edge to enter into 'post-antibiotic' era.²⁻⁵ Irrational prescribing of antimicrobials is quite common in Bangladesh.⁶⁻¹⁰ Physician's prescribing practice can be influenced by many factors, and of which pharmaceutical industry's promotional activities are highly successful in altering doctor's prescribing habits, specially in developing countries, like Bangladesh, where there is lack of access to independent and unbiased sources of information about medicine.¹¹⁻¹³

Printed promotional materials or drug promotional literatures or materials are the commonly applied marketing technique.^{14,15} Pharmaceutical representatives distribute these literatures as educational materials during their

detailing and leave behind these materials to physicians. These advertisements disseminate the information regarding product name and its pharmacological characteristics, marketing claims and cited references in support of these claims.^{16,17} But educational value of this material is questionable.¹⁸ Evidence showed that promotional literatures provided by pharmaceutical industry contain deviation and exaggeration and there is intentional manipulation and misinterpretation of information.¹⁹⁻²³

Bangladesh had formulated a Code of Pharmaceutical Marketing Practices (CPMP) in 1994 to promote and support continuous development and strict adherence to the ethical principles of marketing of pharmaceutical products.²⁴ In Bangladesh, unethical promotional activities are going on varying level. Promotional materials contain exaggerated claims and other deviations from the standard.²⁵⁻²⁹ Hence, the present study was carried out with the attempt to analyze pharmaceutical promotional literatures of antimicrobials where their adherence to existing Code of Pharmaceutical Marketing Practices was evaluated.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in Bogura city on November 2017.

Pharmaceutical promotional literatures (Printed promotional materials) were collected from three private practitioners of Bogura city of Bangladesh. Large designed envelopes were provided to the physicians to store the promotional materials which they receive from representatives of pharmaceutical companies during one week of study period (Study weeks were chosen with 6 working days in each). Promotional materials other than antimicrobials were excluded and promotional materials other than 'full advertisement' were excluded. Adherence of those promotional materials to the Code of Pharmaceutical Marketing Practices (CPMP) was assessed by a checklist. Among the mentioned parameters of CPMP, presence of selected parameters such as indications, side effects, precautions and contraindications were assessed and compared with Bangladesh National Formulary (BDNF) or British National Formulary (BNF).²⁹ Total 79 promotional materials with 'full advertisement' of antimicrobials were analyzed for this study.

Data was compiled, presented and analyzed using Microsoft Excel 2007 and was expressed as percentage. As there was no involvement of human subjects and data were retrieved from secondary source, ethical review and approval was not required for this study. Confidentiality was maintained regarding the name of the product and name of manufacturer (Pharmaceutical companies) of the collected promotional literatures.

RESULTS

Table I showing that all reviewed promotional materials (100.0%) contained name of the active ingredient, trade name and detail information about license holder. Active ingredient per dosage formulation, approved dosage schedule, route of administration was mentioned in 87.4%, 70.9% and 92.4% of the reviewed promotional materials respectively. The percentage of indications, side effects, precautions and contraindications were 93.7%, 46.8%, 39.3% and 43.1% respectively. There was no mentioning of issue of antimicrobial resistance in a single promotional literature.

Table I Presence of different information in promotional literatures

Parameters	Proportion of promotional literatures contains the mentioned parameter (Expressed in percent) (n=79)
Name of active ingredient	100.0% (79/79)
Trade name	100.0% (79/79)
Active ingredient per dosage formulation	87.4% (69/79)
Approved dosage schedule	70.9% (56/79)
Route of administration	92.4% (73/79)
Indications	93.7% (74/79)
Side effects	46.8% (37/79)
Precautions	39.3% (31/79)
Contraindications	43.1% (34/79)
Detail information about license holder	100.0% (79/79)

Regarding indications, 67.9% (74/79) promotional literatures matched with BDNF/BNF. While regarding side effects, precautions and contraindications 18.9% (7/37), 21.6% (8/31) and 29.4% (10/34) promotional literatures matched with BDNF/BNF (Table II).

Table II Mentioned Information Matched with BDNF/BNF

Parameters	Total mentioned n=79	Matched in number	Matched in proportion
Indications	74	48	64.9%
Side effects	37	7	18.9%
Precautions	31	8	21.6%
Contraindications	34	10	29.4%

DISCUSSION

Knowledge, understanding and ideas about medicines are constantly changing. Newly innovated medicines come on the market and experience with existing medicines expands. So it is important for physicians to keep up-to-date about medicines. In Bangladesh,

availability and accessibility to independent sources of medicine information is very limited. In general, physicians rely primarily on medical representatives as sources of information about medicines and pharmaceutical companies conduct their promotional activities in the name of education.³⁰ Printed promotional materials are the most commonly used tool and are directed to increase responsiveness and knowledge about promoted products and provides written version of verbal message provided by the medical representatives.^{14,15} There are evidences that information provided by medical representatives is frequently incomplete and biased towards the products being marketed and often emphasize only on the positive aspects of products and overlook or give little coverage to the negative aspects.³¹⁻³³ Current study was conducted in this backdrop to evaluate the quality of promotional literatures of antimicrobials.

In the present study it was found that name of the active ingredient with trade name along with detail information about license holder was mentioned in all promotional literatures and the similar results were reflected in few previous studies.^{19,29,34} However, essential prescribing information like therapeutic indication, side effects, precautions and contraindications were present in promotional literatures in varying degree which concordance with some of the previous studies conducted in India, Bangladesh and Nepal.^{22,29,35} High proportion of exaggerations in case of indications and/or omissions of safety information was similar to studies conducted in Bangladesh.^{28,29} None of the promotional literature mentioned the issue of antimicrobial resistance which was really unfortunate. It is necessary to control and monitor the promotional activities of pharmaceutical company within the hospital environment and ensure that such activities have educational benefit.³⁶

LIMITATIONS

This was a small scale study where only 79 promotional literatures were analyzed. Large scale study will be helpful to draw precise conclusion.

CONCLUSIONS

To practice evidence-based medicine, physicians need to be up-to-dated with recent development in medicine research. Current study found out gross deviation in pharmaceutical promotional literatures of antimicrobials. Strict regulatory approaches as well as awareness of physicians regarding deceptive promotion are needed for rational prescribing of antimicrobials.

RECOMMENDATIONS

Strict regulatory approaches as well as awareness of physicians regarding deceptive promotion are needed for rational prescribing of antimicrobials.

DISCLOSURE

All the authors declared no competing interest.

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