

Research Letter

Counterfeit medicines sale on online pharmacies in India

TO THE EDITOR

Counterfeit drugs most often originate in budding industrial economies, especially, India-before entering the global market.^[1,2] The consequences for global health are ominous, with counterfeit medicines leading to anti-microbial resistance in diseases such as malaria, human immunodeficiency virus infection and acquired immune deficiency syndrome and tuberculosis; causing hundreds and thousands of deaths in developing countries.^[3,4] Collectively, these counterfeit medicines present an austere problem to the safety and validity of the global drug supply chain, with the internet representing one of the most profitable and getatable ways for illegal market entry and distribution.^[3,4]

The reality that these dangerous online counterfeit drug purveyors continue to profit from the anguish and agony their products inflict on consumers should act as a call to action to develop regulatory and enforcement models that will prevent such activities from being accessible.^[3]

Illegal online pharmacies in India have become life threatening nuisance, but Indian government has still not deemed it appropriate to tackle this problem. The truth is that online pharmacies in India are operating in an unregulated manner. Thus, the aim of our study was to evaluate the percentage of counterfeit medicines sale on internet pharmacies in India.

METHODS

The present study was a cross-sectional study to evaluate the quality of online medicines during May-June 2014. Online pharmacies that provided the study medicines and could supply them to the study site, Jaipur, were selected for the purchase of medicines. Thus, a total of 17 medicines were received from 8 pharmacies. This included 12 samples of antibiotics, and 5 samples of multivitamins. Antibiotics further included 4 samples, each of amoxicillin capsules, ofloxacin ornidazole tablets, and cefuroxime axetil tablets. The generic name of the product, content information from the printed label, the manufacture and expiration dates and batch number were recorded for each sample. Pharmacopoeial procedures

for the analysis of the samples were established and performed. Antibiotics were analyzed using high-performance liquid chromatography, while multivitamins were analyzed using UV spectrometer and volumetric analysis.

RESULTS

All the antibiotics were prescription medicines, and all the pharmacies had requested for the prescription; however, two of the pharmacies did send the medicines without receiving the prescription. Samples of multivitamins were over-the-counter drugs.

It was observed that all of the selected websites had mentioned their contact details and all the sites encouraged the consumers to consult a physician, however, one of the websites even provided consultation services to its consumers. Dosage and administration, effects and efficacy, and side effects related to the products were explained in only two of the sites.

All the four amoxicillin capsules showed red colored unsealed capsules with an imprint logo of the company on cap and brand name on the body containing almost white powder.

Of the tablets of ofloxacin and ornidazole, 2 samples were white elongated biconvex film coated tablets scored on one side while the other 2 samples were orange colored elongated biconvex film coated tablets.

All the 4 samples of cefuroxime axetil tablets were white elongated biconvex film coated with an imprint "250" on one side while the 5 samples of B-complex with vitamin C showed black/orange colored unsealed capsules with an imprint of brand name on both the cap and body, containing yellow colored powder.

Quantitative analysis showed that the contents of all the samples were in the acceptable range (90–100%) and none of the samples failed the chemical analysis test.

COMMENTS

Steps should be taken at country levels to make paramount amelioration of existing regulations focusing online pharmaceutical transactions. Withal,

there is an insistent need at international level to formulate common regulation and agreements focusing issues of pharmaceutical e-commerce.

Using public-private tie-ups leveraging characteristics of internet-based technologies and engaging private sector service providers can be the basis of an encyclopedic policy to address this planetary public health concern. Government schemes like National Rural Health Mission can aid in promoting proper procedures to acquire drugs, prevent self-medication through campaigns on television, radios and social media.

At an individual level, if proper precautions are taken in the selection of the online pharmacy, as was done in the present study, one can be safe from the menace of counterfeit medicines.

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Website: www.jrpp.net

DOI: 10.4103/2279-042X.145397