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Quantification of antimalarial drugs in India

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Substandard and counterfeit antimalarial medicines pose a serious threat to public health. These counterfeit/substandard medicines increase the mortality by decreasing efficacy; it also increases the threat of emergence of drug resistance, adverse effect from incorrect excipients/ active ingredients which may be potentially dangerous to the patients. Owing to this, a pilot study was conducted to survey quality of drugs collected from different malaria endemic areas of India. The survey was conducted in different geographical regions based on malaria endemicity i.e. Uttar Pradesh (U.P.), Mizoram, Meghalaya, Gujarat, Madhya Pradesh. Antimalarial samples of ACT (Artesunate+Sulphadoxine-pyremethamine), (Artesunate+Lumefantrine), Chloroquine, Primaquine were collected for qualitative analysis. A mystery shopper approach was used for collection of samples. The quality of antimalarial drugs from these areas were assessed by using Global Pharma Health Fund Minilab test kit. This includes physical/visual inspection and disintegration test, thin-layer chromatography. High performance liquid chromatography was carried out for quantitative assessment of active pharmaceutical ingredient. A total of 101 brands out of which 38 were for CQ, 38 for AL, 7 for AS+SP, 18 for primaquine were tested from different sites. In this study, 97.03% of the tablets passed minilab disintegration, 2.97% consisting did not pass disintegration test. The variable disintegration and retention factor might be due to improper handling during storage, humid temperature, transportation and distribution. However, HPLC analysis confirms standard active pharmaceutical ingredient in the tablets.

Biography

Arora T K has completed PhD in Pharmacology (Feb 2010-2014) from Uttarakhand Technical University, Dehradun. She has six months (6 months) (Dec 2014-May 2015) of research experience on the position of Research Assistant in National institute of Malaria research (ICMR), Dwarka, Sec 8, New Delhi and Two years and six months (2.6 Years) (Mar 2012-September 2014) teaching experience on the position of Assistant Professor in P.D.M College of pharmacy, Bahadurgarh, Haryana.

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