A STUDY ON THE QUALITY OF VARIOUS BRANDS OF QUININE SULPHATE TABLETS IN NAIROBI COUNTY.

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ABSTRACT

Quinine, an antimalarial drug from the bark of the cinchona tree is still the most effective drug indicated for the treatment of severe malaria (in all age groups), for uncomplicated malaria in pregnant women and for drug resistant malaria. Antimalarial medicines are central to any strategy for effective reduction of mortality related to malaria. Efficacy and safety of antimalarial medicines, as measured by their quality, are therefore essential in mitigating morbidity and reducing deaths. Assured quality is also a principle for slowing down the development of resistance to antimalarial medicines and is important for the perception of quality of health care and good treatment by health-care professionals and patients. The purpose of this study was to assess the quality of various brands of quinine sulphate tablets in Nairobi County. This was an experimental study design that subjected all the brands sampled to the specifications of the British Pharmacopoeia Monograph on quality tests for uniformity of weight, content and dissolution. All brands were sampled randomly from one public and three private pharmacies, 75% were from local manufacturer and 25% imported and they were analysed at the Mount Kenya University Pharmaceutical Chemistry Laboratory. The average 20 tablet's weights varied from 393.65mg to 624.35mg. There was slight deviation of individual weight from some brands but not more than two tablets deviated by 10% from the mean weight. The RSD of the weights of each product varied from 1.19% to 3.81% with none of the brand deviating by 5% RSD from the mean weight. The percentage label claim of the four products was seen to vary with the lowest being 95.46% and the highest 101.52% and the RSD percent content varied from 0.63% to 1.45%, with none of the brand deviating by 5% RSD from the mean percent content. The percent dissolution of the active ingredient was seen to vary with the lowest being 96.81% and the highest 98.04%. All the four products analyzed met the British Pharmacopeia method of analysis specifications for quinine sulphate content by non-aqueous titration, uniformity of weight and dissolution by U.V. The findings of this study revealed that there is no difference in quality among the various brands of quinine sulphate tablets being sold in the Kenyan market irrespective of the country of origin. The research was aimed to benefit the policy makers, consumers and aid the manufacturers to reasonably reproduce the same products that can be prepared in different laboratories by different operators and by the same operator on different occasions.