MICROBIOLOGICAL ASSAY OF AMOXICILLIN CAPSULES IN THE RETAIL MARKET: A CASE STUDY OF THIKA TOWN.

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ABSTRACT

The use of antibiotics in health delivery is inevitable since it is one of the most prescribed medications. The quality and efficacy of these medications are crucial in health systems since they can affect the quality of healthcare delivery. The study was designed to determine the quality and purity of some amoxicillin capsules on the Kenyan market. A total of 7samples, of different brands were sampled from different pharmacies in Thika, Kenya, from August, 2014 to September, 2014. The purity, activity and zones of inhibition (ZI) of the samples were determined by the disc diffusion method against *Staphylococcus aureus*. The biological assay results revealed smaller zone diameters for all the various amoxicillin brands evaluated compared to the reference standard. For samples analyzed, about half of the brands showed API within the British Pharmacopoeia (BP) and United State Pharmacopoeia (USP) specifications of 90 to 110% purity (Sample B 92.67, E 91.67, F 996.33%). All the remaining samples contained API below the British Pharmacopoeia (BP) and United State Pharmacopoeia (USP) specifications. However this deviation from specifications could not be directly judged as counterfeit medicine since the procedures were not performed under controlled conditions such as humidity. This could have affected the degree and rate of absorption of antibiotic stock solution by discs. Efforts should therefore be made to improve the quality and storage conditions of these antibiotics and also constant monitoring and surveillance of activity and potency of these antibiotics should be done. These results suggest the need for increased monitoring and surveillance of these antibiotics by their manufacturers and regulatory bodies.