ABSTRACT

Investigation of Perception of Generic Drugs among Patients, Physicians and Pharmacists Resulting in Formulation Development and Evaluation of Metformin Hydrochloride Dispersible Tablets

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The World Health Organization and human legislations stated that medicines and healthcare should be available and accessible to populations worldwide. To fulfil the medicinal part of this requirement generic drugs, which are lesser in cost to their counterparts, have reduced medicine expenditure to patients and governments, thereby allowing more persons an opportunity to improve their health. However, some individuals still considered generic drugs as inferior and less effective. This research utilized various procedures, such as a survey and dissolution, to investigate generic drugs employed within the public health sector in Trinidad. Additionally, resin-drug complexation and other methods were involved in formulation development to produce innovated taste-masked dispersible metformin hydrochloride tablets, which were compared to other treatments including a marketed innovator. The results exhibited Good/Excellent perception amongst patients, physicians and pharmacists about generic drugs, though there were concerns of efficacy, safety and quality. Education demonstrated and was suggested to improve generic drug use. One of the generic drugs was not comparable to the two innovators used in the research. Furthermore, one of the two innovators was compared to the novel taste-masked formulation in in-vivo studies and exhibited equivalent efficacy via blood glucose levels and metformin hydrochloride concentrations. In conclusion, generic drugs can be suitable alternatives but they must offer safe, effective and suitable quality compared to their innovator to promote pharmaceutical care; in addition, novel taste-masked dispersible metformin hydrochloride tablets were comparable to the marketed formulation.

Keywords: Bioequivalence; dispersible; dissolution; generic drugs; metformin hydrochloride; Trinidad and Tobago.