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Erratum Article

DEVELOPMENT AND EVALUATION OF FLOATING TABLET OF METOPROLOL SUCCINATE FOR INCREASED BIOAVAILABILITY VIA *IN VIVO* STUDY

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ABSTRACT

Objective: This study was performed to formulate a floating tablet using hydrophobic glyceryl behenate (GB) and hydrophilic hydroxypropyl methylcellulose polymers, optimization of the same for retention in stomach and sustained drug delivery over a period of 20 h from upper gastrointestinal tract so as to increase its oral bioavailability.

Methods: Granules of GB with the metoprolol succinate (MS) was formulated and compressed with the other ingredients to formulate a floating tablet. Physiochemical parameters of an optimized formulation along with its *in vitro* buoyancy study, dissolution study, *in vivo* studies in rabbit, and stability studies were performed.

Results: Differential scanning calorimetry data show no interaction between polymers and the drug MS. A 3^2 factorial design was applied for optimization purpose, and from ANOVA and surface response plot the best formulation (F3) was obtained. *In vitro* dissolution study shows sustained drug release for 20 h for all the formulations and *in vivo* studies using rabbit model show increased bioavailability of an optimized formulation F3 as compared to the marketed sustained release formulation of MS (25 mg). Stability study shows no comparable differences in physical parameters and the drug release of initial formulation and the one which is kept for accelerated stability testing.

Conclusion: Hence, we can conclude that a floating tablet containing a combination of hydrophilic and hydrophobic polymers can be used for gastric retention for more than 20 h which will increase the oral bioavailability of MS.

Keywords: Gastroretentive formulation, Metoprolol succinate, Glyceryl behenate, Improved bioavailability.

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