

Scienxt Journal of Pharmacy and Drug Research (SJPDR)

Fabrication and characterization of ace inhibitor loaded transdermal patches

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ABSTRACT

The aim of the study is to formulate and evaluate transdermal patches of Captopril. In the present study, matrix type was prepared by molding techniques. This mode of drug delivery is more beneficial for chronic disorders such as hypertension and some types of congestive heart failure, which require long-term drug administration to maintain therapeutic drug concentration in plasma. Transport of drugs or compounds via skin is a complex phenomenon, which allows the passage of drugs or compounds into and across the skin. In the present work, an attempt has been made to formulate and evaluate the transdermal patches of Captopril using various blends of polymer. The polymeric Eudragit grade used for the formulation of transdermal patches showed good film-forming property. The patches formed were thin, flexible, smooth, and transparent. The weight variation tests showed less variation in weight and suggested uniform distribution of drug and polymer over the mercury surface. The thicknesses of the transdermal patches were found to increase on increasing concentration of polymers. All the patches showed good flexibility and folding endurance properties. The result suggests that the formulations with increased polymer concentration showed long folding endurance. The *in-vitro* drug release studies showed that formulations F3 with increased concentration of polymer showed good release. The drug content analysis showed minimum variations suggesting uniform distribution of drug.

Keywords: Captopril, Transdermal drug delivery.