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Formulation and Evaluation of Diclofenac Sodium Patch.

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Abstract: *Present study was to develop Diclofenac Sodium Transdermal patches to bypass first pass metabolism and overcome all the problem of conventional dosage forms. A recent approach to drug delivery is to deliver the drug into systemic circulation at predetermined rate using skin as a site of application. The release rate from TDS can be tailored by varying polymer composition. Transdermal drug delivery has made an important contribution to medical practice. It is a medicated patch that delivers a specific amount of medication through the skin into the blood stream. An advantage of a transdermal drug delivery route over other types of medication delivery is that the patch provides a controlled release of the medication into the patient, usually through either a porous membrane covering a reservoir of medication or through body heat melting thin layers of medication embedded in the adhesive. Diclofenac is a NSAID agent used for the treatment of rheumatoid arthritis, osteoarthritis and relief the pain of varying origin treatment. Evaluation parameters like physical appearance, uniformity of weight, thickness, folding endurance, moisture content, drug content, dissolution study and diffusion study are all carried out. The results show that patches of diclofenac sodium obtained by the solvent evaporation method had acceptable physicochemical characteristics and satisfactory % drug release. The present investigation was aimed to formulate transdermal films of non steroidal anti-inflammatory drug, Diclofenac sodium using mercury substrate method and evaluated for physicochemical parameters like thickness, weight variation, moisture uptake, moisture content, folding endurance, and drug content values. Three transdermal patches were prepared using different concentrations of ethyl cellulose. It was concluded that as the concentration of polymer increases the thickness of patch, weight uniformity and folding endurance increases. Percentage moisture content and percentage moisture uptake decreases with increase in polymer concentration.*

Keywords: Transdermal; Inflammation; Skin; NSAID; HPMC polymer

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