- **الملخص باللغة الانجليزية:**

Formulation of Chlorpheniramine maleate in span 60/ tween20 based organogels for transdermaldelivery -

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Abstract

Objectives: Transdermal drug delivery is an attractive alternative to the oral route of drug administration due to avoidance of the first pass effect, reduced adverse reactions and better patient compliance. The aim of the study was to formulate chlorpheniramine maleate in anorganogel base in order to overcome the problems related with oral route. **Materials and methods:** Different organogels were prepared using a mixture of span60 and tween 20 in sunflower oil at 60˚C. The formulated organogels were evaluated for physical appearance, emulsion type, drug content, pH, viscosity, gel-sol transition temperature, spreadability and in vitro drug release through cellophane membrane. The permeation of the optimum formulation through rat skin was compared with organogels containing different concentrations of menthol. Finally, the efficiency of organogel formulation with the highest skin permeation was studied in vivo and compared with oral Chlorpheniramine maleate. **Results:** All the prepared organogels exhibited acceptable physical properties. Surfactant mixture / water ratio and viscosity had significant effects ($P < 0.05$) on % drug release. Incorporation of 5% menthol significantly improved chlorpheniramine maleate permeation through rat skin. Skin irritancy testing showed no allergic manifestation. Promising rat edema inhibition within one hour was observed for 2% and 5% Chlorpheniramine maleate organogel rather than oral route. **Conclusion:** Transdermal application of chlorpheniramine maleate in organogels may be a promising alternative to the oral route