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(57) Abstract :
The present invention relates to the development of SLNs by using Clobetasol propionate (CP) as model drug for topical delivery. A suitable dermatological gel was prepared by incorporating clobetasol propionate loaded ethanolic lipid vesicles for prolonged drug release, improved therapeutic efficacy, better dispersity, and to reduce systemic absorption and side effects of the drug. Ethanolic lipid vesicles were prepared by cold method and evaluated for the particle size, Poly-dispersity index, and entrapment efficiency. Optimized vesicles with vesicle size 199.6 and % entrapment efficiency of 88.87±1.01 was formulated as Carbopol gel and compared with controlled gel, and hydroethanolic gel of Clobetasol propionate. Percent drug diffusion from ethanolic lipid vesicular gel was much higher than hydroethanolic gel and controlled gel formulation. Skin irritation study showed no sign of skin irritation. Thus, the results collectively suggest that ethanolic lipid vesicles proved to be an effective nonirritant carrier for improved penetration of clobetasol propionate for potential topical therapeutics.

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