



Formulation Development and Characterization of Drug Loaded Transethosomes for Transdermal Delivery: Review Article

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Abstract: Ultradeformable vesicles (UDV) have recently become a promising tool for the development of improved and innovative dermal transdermal therapies. Transdermal route is one of the attractive routes for drug delivery due to its easy accessibility. Effective delivery of bioactive molecules through skin is however still a challenge. The development of vesicular formulations has generated some promising solutions to the problems associated with drug delivery not only related to drugs but also those of barriers like skin. Conventional lipid based vesicular systems like liposomes show in ability to cross intercellular channels of stratum corneum. To overcome this drawback of conventional lipidic systems. Ethanol based vesicular carriers were developed by pharmaceutical scientist. Transethosome come under the category of ethanol based lipidic carriers. Transethosomes are composed of phospholipid, ethanol and edge activators or permeation enhancers. Ethanol based vesicular systems represent non-invasive carriers which enable the drug to reach in deeper epidermal layers or systemic circulation. Drug actives were incorporated in UDV formulations further characterized for vesicles imaging by transmission electron microscopy, mean vesicle size and; zeta potential by laser Doppler anemometry; stability and entrapment efficiency. Transethosomes may contain both advantages of Transferosomes and ethosomes. The nature methods of preparation, and evaluation parameters of transethosomes were discussed in this review along with their applications, problematic issues and future progress.

Keywords: Edge activator, Transethosomes, Transdermal drug delivery, Vesicular Permeation enhancers, In vitro study.