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PRONIOSOMES FOR IMPROVED TRANSDERMAL DRUG DELIVERY – A REVIEW

Suvarnalata Suhas Mahajan
Smt. Sharadchandrika Suresh Patil Collge of Pharmacy, Chopda

ABSTRACT

Nanotechnology is an advancing technology expected to bring revolutionary changes in the field of life sciences including drug delivery, diagnostics, nutraceuticals and biomedical for implants. Over the last few years comprehensive research has been done over provesicular approach for transdermal drug delivery. The transdermal route is very useful, but the stratum corneum acts as major barrier which is present on the top of the epidermis and behaves as a rate limiting membrane for penetration of drugs. The vesicular drug delivery system is potentially beneficial as the vesicles tend to fuse and adhere to the cell surface, thus increasing the permeability of the drug. Liposomes and niosomes are also vesicular system which can cross the stratum corneum but the major drawback is their instability. Proniosome is a dry formulation using suitable carrier coated with nonionic surfactant and can be converted into niosomes immediately before use by hydration. This proniosomes minimize the problems of niosomes and provide additional convenience in transportation, distribution, storage and dosing. Proniosomes can entrap hydrophilic as well as lipophillic drugs. The focus of this article is to provide an overview on aspects related to mechanism of skin permeation of provesicular system; formulation, evaluation and application of proniosomal gel as a carrier for transdermal drug delivery.

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FORMULATION AND DEVELOPMENT OF NASAL IN SITU GEL CONTAINING CNS DRUG

Deepali V. Chaudhary*[1], Vibha M. Bante[2], N. M. Mahajan[3], N.G.Dumore[4]
[1,4]Dasasaheb Balpande College of Diploma in Pharmacy, Besa, Nagpur,
[2,3]Dasasaheb Balpande College of Pharmacy, Besa, Nagpur

ABSTRACT

In situ gel forming drug delivery is a type of mucoadhesive drug delivery system. At the site of drug absorption they swell to form a strong gel that is capable of prolonging the residence time of the active substance. Nasal mucoadhesive drug delivery system is designed with an aim to target the drug and to maintain the dosage form at its absorption site for an extended period of time. This will result in the enhancement of the absorption of the drug , which will in turn reduced the presystemic metabolism ; increase the bioavailability of the drug ; initiate rapid onset of action .The present study was aimed towards formulating the nasal in situ gels of Lurasidone HCl using thermoreversible polymer Pluronic F127 and mucoadhesive polymer carbopol 934. The in situ gels so prepared were characterized for its gelation properties, viscosity, gel strength, Mucoadhesion, drug content, drug release rate and for its histopathological studies.

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DEVELOPMENT AND EVALUATION OF ION-EXCHANGE RESIN BASED TASTE MASKED EXTENDED RELEASE PRODUCT OF DEXTROMETHORPHAN HYDROBROMIDE

Shrikant V. Pusala*, Purushottam S. Gangane, Pritam R. Bande, Nilesh M. Mahajan
Dadasaheb Balpande College of pharmacy, Besa, Nagpur

ABSTRACT

The aim of present work is to develop robust, stable, taste masked extended release micro pellets of Dextromethorphan HBr, which can be further, incorporated in to tablets, capsules or suspension. Complexation of drug with resin not only masks the bitter taste of the drug but also delay its release. The total % Impurity levels for drug resin complex manufactured grade (Amberlite 476) were not detected. The total % Impurity levels for drug resin complex manufactured grade (Amberlite 69) are highest and greater than limit among other drug resin complex. Resin with grade (Amberlite 476) was selected for