International Journal of PharmTech Research
CODEN (USA): IJPRIF, ISSN: 0974-4304, ISSN(Online): 2455-9563
Vol.13, No.02, pp 07-17, 2020

Formulation and Evaluation of Mupirocin Nimosomal Gel for Topical Drug Delivery System

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Abstract : The present study was to formulate and evaluate the mupirocin niosomal gel using surfactants span 80 & tween 80 for the preparation of niosomes. Mupirocin entrapped niosomes were prepared by ether injection method and transmembrane pH gradient drug uptake process. Niosomes were prepared by altering the ratios between various non-ionic surfactants (span 80 & tween 80) whereas the concentration of cholesterol and drug was kept constant. The prepared niosomes were characterized for size, shape, entrapment efficiency, invitro drug release studies. The highest entrapment efficiency(99.17%) and drug release (96.14%) was obtained for tween 80 (1:5:5) prepared by transmembrane pH gradient method. The best formulation among the two techniques was selected for incorporated into gel formulation. The prepared niosomal gel and plain gel were subjected to evaluation studies like drug content, invitro drug diffusion studies. The studies were demonstrated that niosomal gel was shown beter pharmacological activity than the conventional mupirocin gel. Based on the results it was concluded that niosomal preparations offers more advantageous than the conventional preparations.

Keywords : Mupirocin, Niosomes, non-ionic surfactants (span 80, tween 80), Carbopol.

Rajesh Akki *et al* /International Journal of PharmTech Research, 2020,13(2): 07-17.

DOI= http://dx.doi.org/10.20902/IJPTR.2019.130202

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