KSN 2020
FULLY VIRTUAL MEETING

Abstract Type : Poster
Abstract Submission No. : PO-1466

Formulation and evaluation of repaglinide loaded liposomes for treatment of diabetes.

Rahul Jain
Department of Pharma, Novartis Healthcare Private Limited, India

Objectives: Diabetes is the disease caused due to deficiency of insulin. Antidiabetic drug repaglinide decreases blood glucose level by Stimulate the pancreas to produce more insulin. Frequent administration of repaglinide decreases patient compliance. The present study was aimed to formulate a sustained release formulation of Repaglinide liposomes

Methods: Ethanolic injection method without sonication was used to prepare Repaglinide liposomes. Various parameters such as drug encapsulation efficiency, morphological study by optical microscope, SEM and TEM, vesicle size and zeta potential determination, In -vitro drug release & kinetic study and stability studies were evaluated. FT-IR spectral studies and differential scanning calorimetry studieswere used to perform drug excipient compatability study. Liposomes were prepared by using varying concentration of cholesterol in ethanol injection method. Biological studies were studied using albino rats.

Results: Result: . Liposomes in size range of 88.4 nm to 210.9 nm were obtained. Encapsulation efficiency was found to from 89.5-93.6%. Turbidity studies showed high concentration surfactant formation. The SEM and TEM images showed liposomes are spherical shape. The drug release was slow and sustained for >12 hrs. The formulations followed first order kinetics and release mechanism was non-fickian diffusion.

Conclusions: Conclusion: The maximum percentage of repaglinide release was observed in the formulation F2. From the research it was concluded that the repaglinide is one of the good candidate for the successful development of liposomes for its therapeutic activity.