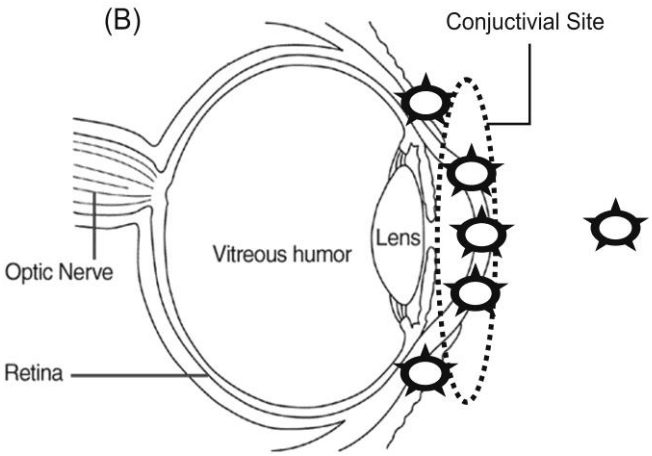
Chitosan entrench with Non ionic surfactant based vesicular formulation of Gancyclovir for Ocular Administration

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Abstract (300 word limit)

The investigation indicates, Non ionic surfactant based vesicular system to enhance residence time of Gancyclovir (GCV) in tear film at ocular site. Even the Niosomes elastic vesicular system can penetrate the posterior eye segment as compare to the conventional Liposomes. The formulation consists of GCV embedded in chitosan, cholesterol (Chol), sorbitanmonostearate (Span 60). Methanol, chloroform was used as organic solvent to dissolve lipid ingredients. Classical mechanical dispersion method by rotary vacuum evaporator was used to formulate niosomal vesicles, which are then characterized for safety, efficacy and stability. Niosomes with average diameter of 436.70±1.3 nm were prepared. Different batches (C1NG5 to C5NG5) were prepared using varying concentration of chitosan (0.1 to 0.5 %) while taking chol and span 60 at constant molar ratio of 2:1 (w/w). The batches C1NG4 shows the desired release of the GCV as compared to C1NG5. No eye irritancy was observed with C3NG4-C4NG5 batches and as compare to available marketed solution of GCV it has higher residence time at ophthalmic site. The results of the present study indicate that ophthalmic noisome of GCV with chitosan was developed; overcoming the problem related to the eye drop therapy because GCV is having low bioavailability in current study with effective mucoadhesive characteristics ($p<0.05$) we gain higher transcorneal permeability with no sign of irritation, swelling, and redness to conjunctiva, iris and cornea of albino rabbits ($p<0.05$)

Image



Niosomal preparation representation of interaction between niosomal formulations embedded with chitosan attached to eye surface.



Biography (150 word limit)

Suchi Thakur has her expertise in the formulation and evaluation of nano Pharmaceuticals. The nano delivery system in Pharmaceutical was expanded by her in the form of transferosomes, liposomes, niosomes at nano and micro level. She has contributed her knowledge in many research projects and giving her best at institutes by teaching which creates a new pathway in improving healthcare in pharmaceutical level. Her recent research work is going on the Microfluidic technique, formulations of nanoparticulate or nano medicine at lab on chip method. This is a novel expansion in bionanomaterial synthesis which in future give a great response and have a different way of focusing in prospect, which will lead to a benchmark in pharmaceutical companies.

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Notes/Comments: