DESIGN AND OPTIMIZATION OF OCULAR INSERTS FOR PROLONGED DELIVERY OF CIPROFLOXACIN WITH CORTICOSTEROID

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ABSTRACT

Ocular drug delivery is very challenging and fascinating for pharmaceutical researchers, especially in the treatment of ocular conjunctivitis. The challenges include delivery of the drug to the eye without causing permanent tissue damage while maintaining a stable therapeutic level at the site of action for a prolonged period of time. The present work focuses on the treatment of ocular conjunctivitis by using combined mechanisms of fluroquinolone antibiotics, providing sustained release of drug from ocular inserts, and using corticosteroid for anti-inflammatory effect and providing comfort to the patient. Quinolone antibiotics, anti-inflammatory agents and polymers with excipients were procured from pharmaceutical companies as gift samples. Different combinations of antibiotics and anti-inflammatory agents were prepared by solvent cast method and the dried films were cut into defined size containing drug and evaluated for different parameters and sustained drug release. Based on *in vitro, in vivo* correlation stability studies, the formulation (antibiotic + anti-inflammatory agent) promising the best once a day sustained release of the drug has been chosen.