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ABSTRACT:

The objective of current study is to develop gastro retentive formulation for Moxifloxacin¹³⁻¹⁰⁻²⁴ using various drug release modifiers and performing In-vitro, In-vivo evaluations. Moxifloxacin¹³⁻¹⁰⁻²⁴ is synthetic fluoro quinolone, antibacterial agent. Floating, Muco Adhesive tablets of Moxifloxacin HCl were prepared using variable amounts of HPMCK100M, Lannea coromandelica gum (LCG) by direct compression technique, Wet Granulation technique respectively. Amount of release modifiers required to obtain the prolonged release of drug shows impact on objective of the study. Formulations were developed and are checked for pharmacopoeial tests. Results shows that all the formulations were lie within the standard limits. Dissolution parameters of all formulations were subjected to kinetic fitting, various statistical parameters were determined. Formulation GRSOF containing 50mg of HPMCK100M and 50mg of LCG, is the best formulation showing similarity $f_2=71.734$, $f_1=4.271$ with the marketed product (AVELOX). It follows Higuchi's kinetics, Non-Fickian Diffusion first order kinetics ($n= 0.717$). In-vivo studies were performed for the GRSOF with 6 healthy rabbits and pharmacokinetic parameters were determined, compared with AVELOX and found that GRSOF produced similar results. GRSOF expected to improve patient compliance by means of providing good clinical outcome.

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Keywords: Moxifloxacin. HCl () gastro retentive ()
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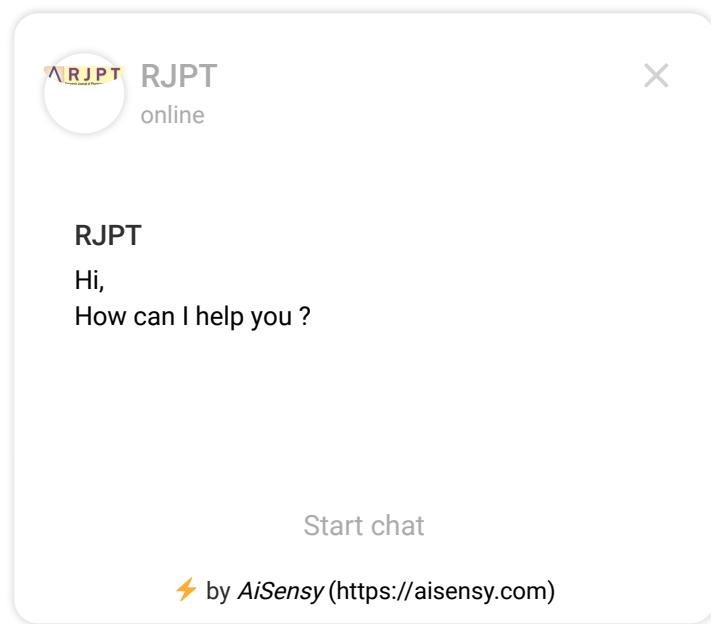
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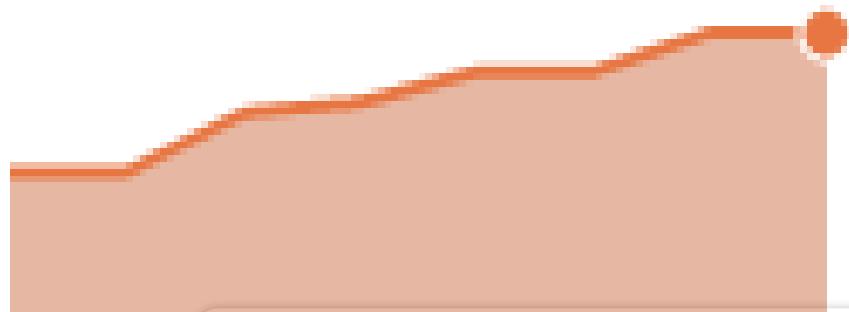
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