Der Pharmacia Lettre

Abstract

Formulation and in-vitro evaluation of lornoxicam floating

microsphere

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The purpose of this research was to prepare a floating drug delivery system of Lornoxicam. In the present study, preparation of Lornoxicam floating microspheres, in-vitro evaluation of Floating Drug Delivery System (FDDS), prediction of the drug release, and optimization of stirring speed and polymers concentration to match target release profile was investigated. Floating microspheres were prepared by Non aqueous emulsion solvent Diffusion technique using Ethyl Cellulose (EC) ,HPMCK4M and HPMCK15M as the rate controlling polymer. Particle size analysis, drug encapsulation efficiency, surface topography, buoyancy percentage and release studies were performed. Results showed that the polymer concentration and stirring speed affected the size, incorporation efficiency and drug release of microspheres (> 12 h) and its floating time (> 12 hr). The best results were obtained at the ratio of drug: HPMCK4M:HPMCK15M (1:2:1.5). The mean particle size of prepared floating microspheres Decreased but the drug release rate from the microspheres Increased as the polymer concentration increased. The developed floating microspheres of Lornoxicam may be used in clinic for prolonged drug release in stomach for at least 12 hrs, thereby improving the bioavailability, prevents degradation in stomach and patient compliance.

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