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Preparation and evaluation of Risperidone fast dissolving films

Amani Mohammed El Sisi
University of Beni-Suef, Egypt

Fast dissolving film is a type of oral drug delivery system, which when placed in the oral cavity it instantly wet by saliva and rapidly disintegrates and dissolves without chewing or intake of water. Risperidone, is an atypical antipsychotic drug which is extensively metabolized due to the hepatic metabolism. Although the formulation of Risperidone into oro-dispersible dosage form will improve the release and bioavailability, the bitter taste of the drug will be a great problem. In the current work, the aim was masking the taste by complexation technique, with a formulation into fast dissolving films. The inclusion complex of Risperidone with 2HP- β -CD (1:1 molar ratio) was prepared by solvent evaporation method. Phase solubility showed stability constant 39.13M⁻¹. The prepared complex was evaluated for taste masking and characterized by using Infrared, differential scanning calorimetry, X-ray diffraction, scanning electron microscope and in-vitro drug release. RisperidoneFDFs were successfully prepared by solvent casting method using HPMC-E5, NaCMC and PVP K25 polymers. Propylene glycol was used as a plasticizer in 30% of polymer concentration. Aspartame 1%, menthol 1% and citric acid 1% were used as sweetening agent, flavouring agent and saliva stimulating agent; respectively. The prepared films were evaluated for appearance, thickness and weight variation, folding endurance, tensile strength, in-vitro disintegration and dissolution, pH and drug content. Formula F2 (containing 2% HPMC) showed the shortest in-vitro disintegration time and the highest dissolution rate so it was selected for further stability and bioavailability studies.

Biography

Amani Mohammed El sisi has completed her PhD at the age of 33 years from Beni-Suef University. She is a lecturer in faculty of pharmacy Beni-Suef University, department of pharmaceutics.

amani_mcc@hotmail.com