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Formulation development and evaluation of press coated pulsatile release formulation of Aceclofenac and serratiopeptidase

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The purpose of this study was to formulate and evaluate press coated tablets of aceclofenac and serratiopeptidase using different polymers such as ethyl cellulose and hydroxyl propyl cellulose as coating materials. This formulation is intended for treatment of early morning stiffness and symptomatic relief from pain in patients with various inflammatory disorders with a distinct predetermined lag time. The core tablet was prepared by direct compression technique. The core tablet was then coated using different proportions of ethyl cellulose and hydroxyl propyl cellulose. A two-factor three level, full factorial design will use in present investigation. The ratio of amount of ethyl cellulose and amount of L-hydroxylpropyl cellulose in outer coat (X1) were taken as independent factor in the present study. Four factors were selected as dependent variable in this study. Percentage of drugs released in 300 minutes (Y1 and Y2) for both drugs and percentage of drugs released in 330 minutes (Y3 and Y4) were taken as dependent variable. Compatibility of drugs with polymers was assured by DSC study. Results of this study indicated that the combinations of ethyl cellulose with hydroxyl propyl cellulose are suitable to optimize pulsatile drug release formulation of aceclofenac and serratiopeptidase. The formulation involved press coating of a rupturable coat around a rapidly disintegrating core tablet of aceclofenac.

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