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Pabreja K, Dua K. Comparative evaluation of *in situ* intestinal absorption of aceclofenac from solid dispersions, β-cyclodextrin complexes and co-precipitates in rats. *Bull. Pharm. Res.* 2011;1(1):26-30.

Abstract: Aceclofenac (AF), a new generation nonsteroidal anti-inflammatory drug with a good tolerability profile in a variety of painful conditions. Aceclofenac is proven to be effective for both acute and chronic inflammatory and degenerative diseases such post traumatic pain, cervical pain, rheumatoid arthritis and osteoarthritis. Aqueous solubility of aceclofenac was enhanced by preparing its solid dispersions and co-precipitates using polyvinyl pyrrolidone (PVP) as water soluble carrier and cyclodextrin complexes with β-cyclodextrin. Absorption studies using *in situ* rat gut technique exhibited greater rate of intestinal absorption with co-precipitates of aceclofenac when compared with solid dispersions and β-cyclodextrin. The intestinal absorption followed the first order rate kinetics. Statistical correlation of *in vitro* drug dissolution and *in vitro* drug absorption indicates a positive correlation (R^2= 0.931 to 0.964). This increased absorption may be due to the solubilization and improved wetting of AF in PVP rich micro-environment.

Key words: Aceclofenac, Solid dispersion, β-Cyclodextrin, *In situ* absorption, Polyvinyl pyrrolidone.

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