Theme**: Medical, Health &Pharmaceutical Sciences**

FORMULATION AND EVALUATION OF CAPTOPRIL FLOATING TABLETS

SARITHA CHUKKA , SUCHITRA

Chaitanya College of Pharmacy Education and Research, Kishanpura, Warangal, Telangana State. **Email**: sarithapuligilla28@gmail.com

ABSTRACT

Objective: The present study involves preparation and evaluation of floating tablets of captopril for improving the drug bioavailability by prolongation of gastric residence time. Captopril is an antihypertensive drug and used to treat hypertension, has been taken as a model drug, because of its short elimination half - life and is stable at pH 1.2 and as the pH increases; the drug becomes unstable and undergoes a degradation reaction. Moreover it is primarily absorbed from stomach.

Materials and Methods: Captopril floating tablets were prepared by the dry granulation technique, using guar gum and xanthan gum as polymers, sodium bicarbonate as effervescent agent, PVP as binding agent, Di calcium phosphate as diluents, Crospovidone as swelling agent and magnesium stearate as lubricant. The prepared tablets were evaluated for various physico-chemical parameters.

Results: Drug-excipient interaction studies were conducted by FTIR and DSC. The results suggested that there was no incompatibility between the drug and polymers. The prepared tablets were evaluated for their physical characteristics. All the parameters were within the pharmacopoeial limits. Further, tablets were also studied for their floating properties, *in vitro* drug release characteristics and stability. The tablets exhibited controlled and prolonged drug release profiles. The developed formulation was found to be stable.

Conclusion: The developed floating tablets of captopril exhibit prolonged release upto 12 h, and thus may improve bioavailability and minimize fluctuations in plasma drug concentrations.