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In-Vivo studies on the bioequivalence of some brands of Fexofenadine tablets marketed in Punjab

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Objective: Fexofenadine is effective in the management of allergic rhinitis and chronic idiopathic urticaria for which it is a suitable option for first-line therapy. This study was aimed to assess the bioequivalence of randomly selected brands of fexofenadine tablets in human urine by simple spectrophotometric method marketed in Punjab ,India .

Method: Bioavailability assessment was conducted by measuring the concentration of drugs in the urine and bioavailability data was presented as cumulative quantity of drugs recovered in urine in 24 hours.

Main: Outcome Measure Cumulative quantity of drugs recovered in urine in 24 hours and estimation of relative bioavailabity.

Result: The two different brands of of fexofenadine were significantly bioequivalent. The result of the percentage cumulative quantity of drug recovered from urine showed that there was no statistical significant difference among fexofenadine brands.

Conclusion: The various brands of fexofenadine (F1, F2) in punjab exhibited same bioavailability data in vivo and can be said to be bioequivalents.

Keywords: Anti-allergic, Bioequivalence, Generic substitution, India

Natural polymer in the design of matrix based sustained release tablet of Indomethacin

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The present study on the evaluation of seed flour of Vigna mungo or black gram as binding, sustained release matrix forming material in tablet formulation. The seeds of Vigna mungo swell and form gelatinous mass when it comes in contact with water due to its hydrophilic nature. Indomethacin was selected as a model drug. The incidence of GI damage of Indomethacin was reduced by sustained the drug action. The phyto and physicochemical properties of seed flour of black gram such as mucilage, swelling index, hydration capacity, powder porosity, loss on drying, pH and viscosity were studied. The drug and Vigna mungo powder were found to be compatible as confirmed by the IR spectral studies. All the formulations showed compliance with pharmacopoeial standards. Among different formulations, SVF1 showed sustained release of drug for 24 hours with 89.95% release. Tablets prepared with Hydroxypropylmethylcellulose (HPMC 50cps) as matrix forming material for the comparative study. The dissolution profiles of the SHF2 and matrix tablets were close to the profile obtained by seed flour of black gram based matrix tablets SVF1. The kinetic treatment showed that the release of drug follows zero order model and anomalous diffusion for SVF1 and the drug release of SHF2 was best explained by Higuchi's model and anomalous diffusion. It is concluded that seed flour of black gram possess substantial matrix forming property that could be used for sustained drug delivery. Accelerated studies proved that the optimized formulation (SVF1) was stable even after 3 months.