

Influence of *Musa sapientum* on pharmacokinetic of metformin in diabetic gastro paresis

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Objective: Present study investigates the effect of *Musa sapientum* L. (MS) bark juice in Diabetic gastroparesis and its effect on pharmacokinetic of Metformin (MET).

Method: Diabetes was induced in rats by administering alloxan (120 mg/kg) saline solution and maintained for 6-8 week. Assessment of diabetes was done by GOD-POD method. The effects of MS bark juice (100 ml/kg) on gastric emptying time, intestinal transit time, contractility of fundus, pylorus and gastric acid secretion in chronic diabetic rats were observed. Even the effect of MS bark juice on the Pharmacokinetic of orally administered single dose of MET (350 mg/kg).

Result: The Juice of MS bark significantly ($p < 0.01$) reduces the blood glucose level in the diabetic rat. There was significant ($p < 0.01$) decrease in the contractility of fundus, pylorus and increases the gastric emptying time, Intestinal transit time, gastric acid secretion in the MS bark juice treated group. There was significant ($p < 0.001$) decrease in the T_{max} , $T_{1/2}$ and increase in the C_{max} of MET in MS bark juice treated group as compare to diabetic group.

Conclusion: Present study suggests that the bark juice of MS shows significant effects in the treatment of gastroparesis and it improves the pharmacokinetic of MET compared to Diabetic Group of rat.

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Comprehensive review of bioanalytical methods and challenges thereof

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The bioanalysis of drugs and related substances has always been a specialization, which deals with rather complex samples. Bioanalysis is described as the analysis of drugs, metabolites and/or endogenous substances in biological fluids. Such methods involve estimation of pharmaceuticals from blood, plasma, urine, blood spots etc. During the development of new drugs, extensive studies are needed at the preclinical and clinical stages. Virtually all aspects of a new drug are to be investigated such as the toxicological and the therapeutic concentrations of drugs and metabolites, Pharmacokinetic studies, optimization studies of the formulations etc. Number of bioanalytical methods by use of HPLC, HPTLC, MS, NMR, Ligand binding assays, etc are continuously developed and published in scientific literature. With the advancement in technology hyphenated techniques were introduced. The proposed work gives a comprehensive review of the bioanalytical methods, associated challenges and possible solutions.

Biography

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