

variations between groups, but also race differences between Korean and western people.

[PE2-7] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Pharmacokinetics of CJ-11555:Improvement of Bioavailability

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Purpose: The objective of the study was to elucidate the pharmacokinetics of CJ-11555, anti-cirrhotic agent, in different physical properties and vehicles. Methods: 8-week-old male intact rats were administered CJ-11555 either intravenously (20 mg/0.6 mL/kg, NMP:PEG400, 1:1) or orally (50 mg/2 mL/kg, various vehicles). Different particle sizes of CJ-11668 and various vehicles were applied to characterize CJ-11555 in vivo. Following the administration in rats, the plasma concentrations were determined by HPLC. Result: Micronized particle showed a significant increase in AUC by 160% as compared with non-micronized CJ-11555. However, no statistical different pharmacokinetic profiles among micronized CJ-11555s were found with the exception of T_{max}. Suspensions in PEG and olive oil also play role in increasing AUC by 13% and 149%, respectively, as compared with suspension in saline. Conclusion: CJ-11555 has a low bioavailability due to its physical properties, however this study showed that smaller particle and lipophilic vehicle were beneficial to improve its bioavailability. In addition, this study suggest that dissolution rate would be the major concern to optimize the formulation of CJ-11555 in the future.

[PE2-8] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Drug Interaction between Diltiazem and Quercetin in Rabbits

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The purpose of this study was to investigate the effect of quercetin(2.0, 10, 20 mg/kg; combined or pretreated) on the pharmacokinetic parameters and the bioavailability of diltiazem(15mg/kg) orally to rabbits. The plasma concentration of diltiazem pretreated with quercetin(pretreated group) were increased significantly (p<0.01) compared to that of control, but those of diltiazem combined with quercetin(combined group) were not affected. Area under the plasma concentration-time curve (AUC) of diltiazem pretreated with quercetin was significantly (p<0.01) higher than that of control. Peak concentration (C_{max}) of diltiazem pretreated with quercetin were significantly increased (p<0.01) compared to that of control. Time to peak concentration (T_{max}) of diltiazem pretreated with quercetin decreased significantly (p<0.05) than that of control. Half-life (t_{1/2}) of diltiazem pretreated with quercetin was significantly prolonged (p<0.05) compared to that of control. Based on these results, it might be concluded that quercetin may enhance bioavailability of diltiazem due to the inhibition of cytochrome P450 and P-glycoprotein, which are engaged in diltiazem absorption and metabolism in liver and gastrointestinal mucosa, respectively.

[PE2-9] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

New Analytical Method of Methyltestosterone in Human Serum by Gas Chromatography/Mass Spectrometry for Pharmacokinetics and Bioequivalence Studies in Human Volunteers

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A simple, specific and sensitive method for the determination of methyltestosterone (MT) in human serum has been developed by gas chromatography/mass spectrometry with the purpose of conducting pharmacokinetic and bioequivalence studies of MT. This method involves the use of liquid-liquid extraction with diethyl ether and