mobile phase were selected for the assay. THP showed good resolutions with no significant interfering peaks observed. The quantitation limit is 0.1 μg/ml. A good linearity (r>0.9999) was obtained in the range of 0.1 - 15 μg/ml of THP. Intra-day accuracy and precision (CV%) were below +14.8% and 17.0%, and inter-day accuracy and precision were below +15.3% and 14.5%, respectively. The developed method was applied to the pharmacokinetic study of THP after oral administration of THP (260 mg) to 8 healthy human volunteers. The principle pharmacokinetic parameters resulted in 122.7 ± 38.1 μg·hr/ml of $AUC_{0\rightarrow 24hr}$, 7.6 ± 1.4 μg/ml of C_{max}, 3.1 ± 0.8 hr of T_{max}, 0.0766 ± 0.0279 hr^{-1} of K_e, and 10.1 ± 3.6 hr of $t_{1/2}$. (This study was supported by a grant from Korea Food and Drug Adminstration).

[PE2-3] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Determination of Levofloaxcin in Human Serum by High-Performance Liquid Chromatography/Diode Array Detector and its Application to Pharmacokinetics of Levofloxacin in Volunteers

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A simple, specific and sensitive method for the determination of levofloaxcin (LFX) in human serum was developed by a high performance liquid chromatography/diode array detector and applied to pharmacokinetic study of LFX in human volunteers. This method involves several steps such as precipitation with acetonitrile, extraction with methylene chloride, evaporation, and concentration, using 0.5 ml of the serum. Symmetry Shield RP18 (3.9 mm x 150 mm, 5 μm) column and 0.3% triethylamine/acetonitrile (90: 10, v/v%) as mobile phase were selected for the assay. LFX and internal standard enoxacin showed good resolutions and no significant interfering peaks were observed. The quantitation limit is 0.2 μg/ml. A good linearity (r>0.9990) was obtained in the range of 0.1 - 4.0 μg/ml of LFX. intra-day accuracy and precision (CV%) were below +6.9% and 10.3%, and inter-day accuracy and precision were below +3.9% and 8.9%, respectively. The developed method was applied on the pharmacokinetic study of LFX after oral administration of LFX (200 mg) to 8 healthy human volunteers. The principle pharmacokinetic parameters resulted in 14.5 ± 3.4 μg·hr/ml of $AUC_{0\rightarrow 24hr}$, 2.5 ± 0.7 μg/ml of C_{max}, 1.1 ± 0.6 hr of T_{max}, 0.1014 ± 0.0074 hr^{-1} of K_e, and 6.9 ± 0.57 hr of $t_{1/2}$. (This study was supported by a grant from Korea Food and Drug Adminstration).

[PE2-4] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Bioavailability of chlorphenesin carbamate in human plasma using a simple HPLC.

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We aimed at determining bioavailability of chlorphenesin carbamate, a musle relaxant, and developing a simple analysis in human blood using HPLC. A rapid and sensitive HPLC method was developed and validated using reverse-phase C18 column with retention time and limit of quantification of toferisone being 8.6 min and 0.5 ng/ml, respectively. Quantification was

performed at 260 nm with tolferison as internal standard. The method involved a simple extraction. In order to study blood level profile in time, eight volunteers were enrolled and orally took 250 mg tolperisone once. The blood sample were collleted from 0 to 9 h after the drug administration. Mean AUC and Cmax value were 89.31±20.8 (ng/ml·hr) and 12.4±2.5 (ng/ml), respectively. And Mean Tmax and T1/2 value were 1.75±0.83 (hr) and 4.46±1.25 (hr). From the results we determine the bioavailability of chlorphenesin carbamate using a newly developed and useful HPLC method.

[PE2-5] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Effect of ketoconazole on the Pharcokinetics of Paclitaxel in Rats

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The purpose of this study was to investigate the effect of ketoconazole(20mg/kg) on the pharmacokinetic parameters and the bioavailability of paclitaxel(40mg/kg) orally coadministered in rats. The plasma concentration of paclitaxel in combination with ketoconazole was increased significantly (coadministration $p<0.05$, pretreatment $p<0.01$) compared to that of control. Area under the plasma concentration-time curve (AUC)of paclitaxel with ketoconazole was significantly (coadministration $p<0.05$, pretreatment $p<0.01$) higher than that of control. Peak concentration(Cmax) of paclitaxel with ketoconazole were significantly increased (coadministration $p<0.05$, pretreatment $p<0.01$) compared to that of control. Time to paek concentration(Tmax) of paclitaxel with ketoconazole were shorter significantly($p<0.05$) than that of control. The total body clearance (CLt) and elimination rate constant(β) of paclitaxel with ketoconazole were significantly reduced ($p< 0.05$) compared to those of control. Half-life ($t_{\frac{1}{2}}$) of paclitaxel with ketoconazole was significantly prolonged ($p< 0.05$) compared to that of control. Based on these results, it might be due to both inhibition of the enzyme cytochrome P450 and P-glycoprotein, which engaged in paclitaxel absorption and metabolism in liver and gastrogintestinal mucosa.

[PE2-6] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Drug Interaction between Verapamil and Paclitaxel in Rats

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The purpose of this study was to investigate the effect of verapamil (5, 10, 20 mg/kg) on the pharmacokinetic parameters and the bioavailability of paclitaxel (50 mg/kg) orally coadministered in rats. The plasma concentration of paclitaxel with verapamil increased dose-dependently, and increased significantly in both coadministration ($p<0.05$) and pretreatment group ($p<0.01$) compared to that of control. Area under the plasma concentration-time curve (AUC) of paclitaxel with verapamil was significantly (coadminist $p<0.05$, pretreat $p<0.01$) higher than that of control. Peak concentration(Cmax) of paclitaxel with verapamil were significantly increased (coadminist $p<0.05$, pretreat $p<0.01$) compared to that of control. The total body clearance (CLt) and elimination rate constant (β) of paclitaxel with verapamil were significantly reduced ($p< 0.05$) compared to those of control. Half-life ($t_{\frac{1}{2}}$) of paclitaxel with verapamil was significantly