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

Choi JunShik°, Li Xiuguo, Lee JinHwan

College of Pharmacy, Chosun University, Guangiu 501-759, Korea.

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

Choi JunShik°, Park HyunJin

College of Pharmacy, Chosun University, Guangiu 501-759, Korea

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

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 gastrointestinal mucosa.

[PE2-7] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

PK/PD Modeling for Glucose-lowering Effect of Metformin in Korean Volunteers

Lee ShinHwa°, Yun MinHyuk, Kwon Kwangll

College of Pharmacy, Chungnam National Univercity, Taejon, 305-764, Korea

Metfotrmin is a biguanide antihyperglycemic agent often used for the treatment of non-insulin dependent diabetics(NIDDM). Metformin lowers both fasting and postprandial plasma glucose concentrations by improving insulin sensitivity at hepatic and peripheral tissues.
The pharmacokinetics and pharmacodynamics of metformin were studied in Korean healthy volunteers at fasting state over 10 hours. Plasma concentrations of metformin were determined by HPLC with UV detection. In order to evaluate the amount of glucose-lowering effect of metformin, the plasma concentrations of glucose were measured for a period of 10 hours followed by the administration of metformin(oral 500mg) and placebo respectively. After single administration of drugs, blood samples were collected for a period of 12 hours. All volunteers were consumed with 13g of white sugar 10 minutes after drug intake to maintain standard initial plasma glucose concentration.
The time courses of the plasma concentration of metformin and the glucose-lowering effect were analyzed through PK/PD modeling using ADAPT II program. The time versus plsma concentration curve of metformin was fitted to an oral two compartment model. The estimated Cmax, Tmax, CL/F(apparent clearance), V/F(apparent volume of distribution), and half-life of metformin were 1.33±0.06㎍/ml, 2.46±0.18hr, 71.2±4.4L/hr, 276.99±21.7L, and 2.66±0.05hr respectively. The maximal decrease in plasma glucose concentration was 54.39 % and detected at 6hr after administration of the drug.
The concentration of metformin and glucose-lowering activity was linked via an effect compartment model. Thus, indirect link model could describe the PK/PD characteristics of metformin and its glucose-lowering effect.

[PE2-8] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Bioequivalence Assessment of Domperidone Maleate Tablets in Healthy Human Volunteers

Lee Jun Woo[1], Kim Sung Chull[1], Yoo Anna°[1], Chang Hyun Sung[1], Lee Kyung Hee[2], Park Jong Min[2], Nam Doo Hyun[1]

[1]College of Pharmacy, Yeungnam University, Gyeongsan, Gyeongbuk 712-749, Korea;
[2]Yeungnam University Medical Center, Nam-gu, Daegu 712-749, Korea

The bioequivalence of two 12.72 mg domperidone maleate tablets (Sinil "Perinal®" tablets vs. Janssen Korea "Motirium-M®" tablets) was assessed in healthy volunteers after oral administration of two tablets in a randomized crossover study. Blood samples were collected at specified time intervals, and plasma was analyzed for domperidone base using a validated HPLC method. The pharmacokinetic parameters of T_{max}, $Cmax_{max}$, $AUC_{o\rightarrow 1ast}$, and $T_{1/2}$ were determined from plasma concentration-time profile of two formulations, and then statistically