

pharmacokinetic parameters and the bioavailability of paclitaxel(50mg/kg) orally in rats. The plasma concentration of paclitaxel pretreated with quercetin(pretreated group) were increased significantly ($p<0.01$) compared to that of control, but those of paclitaxel combined with quercetin(combined group) were not affected. Area under the plasma concentration-time curve (AUC) of paclitaxel pretreated with quercetin was significantly ($p<0.01$) higher than that of control. Peak concentration (C_{max}) of paclitaxel pretreated with quercetin were significantly increased ($p<0.01$) compared to that of control. Time to peak concentration (T_{max}) of paclitaxel pretreated with quercetin decreased significantly ($p<0.05$) than that of control. Half-life ($t_{1/2}$) of paclitaxel 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 paclitaxel due to the inhibition of cytochrome P450 and P-glycoprotein, which are engaged in paclitaxel absorption and metabolism in liver and gastrointestinal mucosa, respectively.

[PE2-21] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Bioequivalence of Two Enalapril Maleate Tablets (Enalapril maleate 20 mg)

Lee Sun-Young^o, Kim Dong-chool

iBiopharm Co., Ltd. Research Laboratory #307 Expotel. 381 Mannyon-dong, Suh-ku, Taejon, South Korea, College of Pharmacy, Chungnam National University, 220 Gung-dong, Yuseung-ku, Taejon, South Korea

Bioequivalence of two enalapril maleate tablets, formulation A and B, was evaluated according to the Korean Guidelines for Bioequivalence Test (KGBT 2001). Twenty healthy male volunteers (19–27 years old) were randomly divided into two groups and a randomized 2x2 cross-over study was performed. Following oral administration of enalapril maleate tablets (20 mg dose), blood sample was taken at pre-determined time intervals and the concentrations of enalapril in plasma were determined using LC-MS. A statistical difference of bioavailability parameters (AUC_{last}, C_{max} , and T_{max}) between the two formulations was tested by ANOVA(EquivTest ver 2.0, Statistical Solutions Ltd.). The result showed that the differences in AUC_{last}, C_{max} , and T_{max} between the two formulations were 3.36%, 0.44%, and -1.11%, respectively. Ninety percent confidence intervals of Log(AUC_{last}) and Log(C_{max}) were 0.9829~1.2002 and 0.9491~1.1237, respectively.

[PE2-22] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Plasma Pharmacokinetics and Urinary Excretion of Isoflavones After Ingestion of Soy Products with Different Ratio of Aglycone/Glucoside in Korean women

Chang Youngeun^o, Choue Ryowon, Kim Chungsook

Department of Medical Nutrition, Graduate School of East-West Medical Science, Kyung Hee University, Seoul, Korea, Drug Research and Development Team, Korea Institute of Oriental Medicine, Seoul, Korea

Lately, soybeans have received considerable public attention for their potential roles in the prevention of the chronic diseases. Epidemiologic study showed that Asian countries have significant health benefits because of the high contents of the isoflavones in their traditional diets(soybean-rich diet). This study was carried out to determine pharmacokinetic parameters of isoflavone in Korean woman. Pharmacokinetic study of three soy products(isogen, soymilk, and fermented soybean) with different ratio of aglycone/glucoside in 26 healthy female volunteers(20-30 years of age) was performed. After ingestion of three soy products, the plasma and urine concentrations of isoflavones were measured by HPLC. The pharmacokinetic parameters were estimated using the WinNonlin program. The plasma AUC of daidzein in soymilk($2101\pm352 \mu\text{g hr/L}$) ingested group was significantly lower than those of isogen($2628\pm573 \mu\text{g hr/L}$) and fermented soybean($2593\pm465 \mu\text{g hr/L}$) ingested group. The plasma C_{max} of daidzein in soymilk($231\pm44\text{ng/ml}$) ingested group was significantly higher than those of isogen($160\pm32\text{ng/ml}$) and fermented soybean($195\pm35\text{ng/ml}$) ingested group. The half-life of daidzein and genistein in soymilk ingested group(5.9h and 5.6h respectively) was significantly shorter than those of in isogen(9.6h and 8.5h respectively) and fermented soybean(9.5h and 8.2h respectively) ingested group. The urinary recovery of daidzein and genistein were 42% and 17% in isogen ingested group, 46% and 23% in fermented soybean ingested group, and 33% and 22% in soymilk ingested group. In conclusion, soy products containing high aglycone forms of isoflavone are more effective than soy products containing low isoflavone