(RNa, RK) and free water clearance (CH2O), whereas ratios of K+ agonist Na+ in urine and filtration fraction (FF) was not changed. SKF 81297, when administered into a renal artery, elicited diuresis both in experimal kidney given the SKF 81297 and control kidney not given, while the effect was remarkable in experimal kidney than those exhibited in control kidney. SKF 81297 given into carotid artery also exhibited diuresis, the potency at this time, compared to those induced by intravenous SKF 81297, was magnusgreat. Above results suggest that SKF 81297 produces diuresis by both indirect action through central function, direct action being induced in kidney. Central diuretic action is mediated by improvement of renal hemodynamics, but direct action by inhibition of electrolytes reabsorption in renal tubule.

[PA1-18] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Cardioprotective and hemodynamic effects of KR-31378, a cardioselective ATP-sensitive potassium channel activator

Lee BH°, Seo HW, Yoo SE, Shin HS

Korea Research Institute of Chemical Technology, Taejon, KOREA

The hemodynamic profiles of KR-31378, a cardioselective ATP-sensitive potassium channel activator, were compared with those of BMS-191095. The cardioprotective effects of KR-31378 were evaluated in rat and dog models of coronary artery occlusion and reperfusion. In conscious rats, KR-31378 slightly increased blood pressure only at high dose (100 mg/kg), unlike BMS-191095 that dose-dependently decreased blood pressure (ED_{20}: 2.03±0.62 mg/kg). In anesthetized dogs, KR-31378 was about 100-fold less potent than BMS-191095 for most hemodynamic parameters including blood pressure (ED_{20} for MAP: 33.7±11.1 and 0.37±0.03 mg/kg, respectively), left ventricular pressure, $+dP/dt_{max}$, and coronary flow, despite similar hemodynamic profiles to BMS-191095. In rats subjected to 45-min coronary occlusion and 90-min reperfusion, KR-31378 (bolus i.v., 30 min before ischemia) reduced infarct size from 58.6±1.9% of the area at risk in controls to 36.6±4.1 and 34.3±1.2% for 0.3 and 1.0 mg/kg, respectively ($p<0.05$). The reduction in infarct size afforded by KR-31378 was inhibited by pretreatment with glibenclamide and sodium 5-hydroxydecanoate, selective ATP-sensitive potassium channel antagonists. In dogs that underwent 2-h occlusion followed by 4.5-h reperfusion, KR-31378 (i.v. infusion of 2 mg/kg over 40 min, starting 10 min before ischemia) markedly reduced infarct size from 48.7±1.4% in controls to 19.1±6.5 ($p<0.05$). These results indicate that KR-31378 is a potent cardioprotective agent with potentially minimal hypotensive effects. Thus, it could be useful in the prevention and treatment of acute myocardial infarction.

[PA1-19] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Neuroprotective Effects of Resveratrol derivative, Compound SY014 Against Ischemic Damage in Rat

SY Choi°, S Kim *, YO Kim, B Leem, JS Lee, PJ Lee, K Suk, HC Kim, SY Kim

Department of Herbal Pharmacology, Graduate School of East-West Medical Science, Kyung Hee University, Seoul 130-701, Korea; Natural Products Research Institute, Seoul National University *, Seoul 110-460, Korea

Neuroprotective Effects of Resveratrol derivative, Compound SY014 Against Ischemic Damage in Rat. One of the ingredients of Vitis vinifera L., that are responsible for potential cardioprotective effect is believe to be resveratrol, which belong to the stilbene group. Resveratrol has been reported to have strong protective for ischemia reperfusion injury in isolated rat hearts. However not much amount of resveratrol in grapes is limited and its synthetic approach is not well established. In this work, the compound SY014, which is a stilbene derivative was synthesized by simple step process. The