[PA3-15] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Effects of Sungkangwon on the Fatty Liver Induced by Alcohol Diet in Rats

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The purpose of this study is to investigate the effect of Sungkangwon (Astragalus membranaceus Bunge + Pueraria lobata Ohwi + Salvia miltiorrhiza Bunge) on fatty liver induced by alcohol diet. Rats were either fed control diet or alcohol diet. On 6 weeks, alcohol group were randomly assigned to groups as follows; supplemented without SKW and with SKW (0.33g/kg, 1g/kg, and 3g/kg). All of five groups were fed the chow diet for 4weeks. After 6 weeks, the blood and liver concentration of TG and total-C is comparably high in alcohol group. After 10 weeks, high concentration of TG and total-C is sustained in alcohol group, but SKW group is recovered to the normal level dose dependently. Also, after 6 weeks hepatic lipase concentration increased to reduce TG in liver, after 10 weeks it decresed, it is considered that dissolution of TG in liver is attained actively by SKW. As a result of our study, it is proved that SKW can reduce the level of TG and total-C in blood and liver by increased hepatic lipase activity, and has some effects to remedy on fatty liver induced by alcohol diet.

[PA3-16] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Kaempferol inhibits the platelet-derived growth factor β-receptor tyrosine-phosphorylation and its downstream intracellular signal transduction pathway in rat aortic vascular smooth muscle cells

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Kaempferol, a flavonol compound, has been reported as the anti-oxidant and anti-angiogenic agent and it has been found to inhibit cell growth in vitro. Abnormal proliferation of vascular smooth muscle cells (VSMCs) plays an important role in development of atherosclerosis. In this study, we examined the anti-proliferative effect and its mechanism on rat aortic VSMCs treated by kaempferol. kaempferol significantly inhibited the platelet-derived growth factor (PDGF)-BB-induced proliferation of rat aortic VSMCs in a concentration-dependent manner by cell count and [^{3}H]-thymidine incorporation assay. Whereas, Kaempferol did not show any cytotoxicity in rat VSMCs in the experimental condition. In order to elucidate the anti-proliferative mechanism, we examined the effect of kaempferol on the PDGF-BB-induced tyrosine-phosphorylation of PDGFβ-receptor. ERK1/2, PI3'K/Akt and PLC-γ1 were also investigated as downstream target signals of PDGFβ-receptor. Pre-treatment of rat aortic VSMCs with kaempferol resulted in a significant inhibition of the PDGF-BB-induced tyrosine-phosphorylation of PDGFβ-receptor. In addition to, kaempferol inhibited phosphorylation of ERK1/2, PI3'K/Akt and PLCγ-1 pathway. The expression of c-fos mRNA was also decreased by kaempferol. These observations suggest that kaempferol has the anti-proliferative activity and the effect may be mediated by inhibition of the PDGF-BB-induced PDGFβ-receptor tyrosine-phosphorylation and its downstream intracellular signal pathway in rat aortic VSMCs.

[PA3-17] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Antitumor effect of Ginsenoside Rh2 and β-glucan in mice

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In the present study, we investigated the antitumor effects of Ginsenoside Rh2 and β-glucan using an experimental metastatic mouse model intravenously injected with B 16 melanoma F10 cells. Oral administration to various concentration of β-glucan (50mg/kg, 100mg/kg and 200mg/kg) dose-dependently reduced the lung-metastatic potential of metastatic B16 melanoma F10 cells in syngenic mice. At same dose, Ginsenoside Rh2(50mg/kg) has more antitumor effect than β-glucan(50mg/kg). Antitumor effect(average tumor weight, average survival rate) of β-glucan 50mg/kg + Ginsenoside Rh2 50mg/kg group is the highest.. Average tumor