Effect of Sanguisorbae Radix on immediate-type allergic reaction by anal therapy

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Anal therapy is another way of taking medicine. It is a traditional pathway but not available in common situation. Nevertheless, it has may benefit and usefulness, it has not treated so much. In this study, we investigated the effect of aqueous extract of Sanguisorbae Radix (Rosaceae) (SRAE) by anal administration on mast cell-dependent immediate-type anaphylactic reactions in vivo and in vitro murine models. SRAE (0.01 to 1 g/kg) dose-dependently inhibited systemic anaphylaxis induced by compound 48/80 in mice. SRAE (0.1 and 1 g/kg) also significantly inhibited local anaphylaxis activated by anti-DNP IgE. When SRAE was pretreated at the same concentrations with systemic anaphylaxis, the plasma histamine levels were reduced in a dose-dependent manner. SRAE (0.001 to 1 ㎎/㎖) dose-dependently inhibited the histamine release from rat peritoneal mast cells (RPMC) activated by compound 48/80 or anti-DNP IgE. The level of cyclic AMP (cAMP) in RPMC, when SRAE (1 mg/ml) was added, transiently and significantly increased compared with that of basal cells. Moreover, SRAE (0.01 and 0.1 ㎎/㎖) had a significant inhibitory effect on anti-DNP IgE-induced tumor necrosis factor-α (TNF-α) production from RPMC. These results provide evidence that anal therapy of SRAE may be beneficial in the treatment of allergic disease..

[PD3-4] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Inhibitory Effects of Butyl Alcohol Extract from Caesalpinia

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The heart wood of Caesalpinia sappan L. has been commonly used as an emmenagogue, and analgesic, a cure for contusion and sprain as well as a remedy for thrombosis in the oriental medicine. The main constituent of Caesalpinia sappan L. is brazilein which has a flavonoid structure.
Melanogenesis is a physiological process resulting in the synthesis of melanin pigment. In this study, We examined the inhibitory effect of butanol extract of Caesalpinia sappan L. on proliferation and melanogenesis of Melan-a cells. After 48h treatment of cells with various concentrations of butanol extract, the cells exhibited a dose-dependent inhibition in their proliferation without apotosis. Therefore, the growth retardation may be due to the cell arrest, not due to cytotoxicity. And there were estimated total melanin contents as a final product and activity of tyrosinase, a key enzyme, in melanogenesis. The melanin contents and tyrosinase activity were decreased from butanol extract in a dose dependent manner.

[PD3-5] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Effect on the herbal formulation KH against hemopoietic side effects of 5-FU in mice

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The ability of KH oral liquid to eliminate damage after chemotherapy was assessed in mouse model. The assay carried out administration of KH(1 and 10 human dose, s.c.) after injection of 5-FU(100mg/kg i.p.) in C57BL/6 mice(5wks,male). The 5-FU was repeatedly supplied to mice at 10 days interval. It was demonstrated that the administration of the KH during 6 to 29 days and investigated changing of body weight, spleen weight, antitumor effect and hemopoietic recovery after the treatment of 5-FU and KH. The results show that the KH reduce the decrease of WBC and PLT.
Levels of WBC(68.9%) as well as PLT(42.6%) were enhanced significantly after KH administrationt. Also protection of spleen by KH was markedly enhanced in the treated group was significantly higher than that in control. RBC may be less affected after KH administration. In addition, expression of IL-2 using RT-PCR and In situ hybrisization method shows that KH can recovery of immuno-factors. In the other hands, the

suppression of antitumor effects by 5-FU was not found in the using tumor-bearing mice as experimental animals, during admisistration of KH.This results show that KH is useful to recovery of hematopoietic side effects without suppression of anti-tumor effects by 5-FU. This results offers benefit with respect to the potential use of these hemopoiesis-protecting drugs in chemotherapy

Poster Presentations - Field D4. Analytical Chemistry

[PD4-1] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

High throughput analysis of metabolic stability of dopamine receptor antagonists and identification of their metabolites by liquid chromatography/tandem mass spectrometry

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An efficient method using high performance liquid chromatography (HPLC) coupled with ion trap mass spectrometry (MS) for simultaneous quantitation of multiple drugs and identification of their metabolites is described. This approach illustrated with analysis of the in vitro metabolism of dopamine receptor antagonists. The compounds were separated into three cassette groups by using a computer program. The samples from incubation with rat liver microsomes were pooled into the designed cassette groups and analyzed by HPLC/electrospray (ESI) ion trap MS in full-scan mode. The metabolic stability of the drugs determined by comparing their signals after incubation for 0 and 30 min, respectively. The quantitative results from the cassette analysis procedure agreed well with those obtained from conventional discrete analysis. In addition, the technique allowed simultaneous detection of metabolites formed during the same incubation without having to reanalyze the samples. The metabolites were first characterized by nominal mass measurement of the corresponding protonated molecules. Subsequent multi-stage tandem spectrometry (MSn) on the ion trap instrument allowed confirmation of the detected metabolites.

[PD4-2] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Studies on test method for residual organic solvents in pharmaceuticals

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The headspace-GC/FID(HS-GC/FID) method was performed for test method development of residual organic solvents in pharmaceuticals. Using SPB-5 and DB-WAX column, 28 kinds of solvents in ICH residual solvents guideline class 1, 2 could be individually identified and quantitated. The following residual solvents were not detected by the headspace injection condition : N,N-dimethylacetamide, N,N-dimethylformamide, ethyleneglycol, formamide, 2-methoxyethanol, N-methylpyrrolidone, sulforane. The effects of the addition of salts, equilibration time, and equilibration temperature on headspace analysis were investigated. The optimum conditions were obtained with addtion of Na2SO4 1g as a salt, simultaneously, the time and temperature of equilibration were 30min and 85℃, respectively. The recovery have found between 90.9 and 114.5% except 1,1-dichloroethene(68.3%). Using DB-624 column & HS-GC/ECD method, 9 kinds of residual solvents could be individually identified and quantitated. This HS-GC method can be applied to test the residual organic solvent in the pharmaceuticals.