

[PA2-10] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Inhibitory effects of component plant in 'Lee Myung Rae Goyak', on nitric oxide production by murine macrophage cell line, Raw 264.7 cell

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The 'Lee Myung Rae Goyak' have been used in Korean traditional medicine for treatment of tumor, swelling, and inflammatory disease. Nitric oxide(NO) is important mediator in the pathogenesis of inflammatory disease. Our study was undertaken that each component of this Korean medicine could inhibit NO production by murine macrophage cell line. Some plants showed the inhibition of NO production in dose-dependent manner in Raw 264.7 cells stimulated by lipopolysaccharide. The inhibition of NO production is dependent on suppression of iNOS at protein level. Now we are further investigating the mRNA level, and NF- κ B expression manner and relation with COX-2 protein and mRNA level.

[PA2-11] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Effects of crude saponin fractions from Panax ginseng and Gynostemma pentaphyllum on hyperglycemia and hyperlipidemia

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The object of this study was to examine the hypoglycemic and hypolipidemic effects of saponin fractions of Ginseng Radix Alba (PG) and Gynostemmae Herba (GP). Crude saponin fractions were extracted from PG and GP using non-ionic resin chromatography and orally administered to streptozotocin (STZ)-induced diabetic rats for 2 weeks and to high fat diet-induced obese rats for 4 weeks. Treatment of diabetic rats with either PG saponin or GP saponin significantly lowered the plasma glucose concentration to the level found in glibenclamide treated or normal rats at a dose of 1 mg/kg. Increase in the plasma triglyceride (TG) level shown in diabetic rats was attenuated by 50% with PG or GP saponin treatment. Combined administrations of PG and GP saponins with different ratios (total dose of 1mg/kg) also showed similar lowering effects on the blood glucose and TG levels of diabetic rats. Treatments with GP (1 mg/kg) or GP (0.5 mg/kg) plus PG (0.5 mg/kg) significantly suppressed the rise in the total cholesterol level of obese rats. The body weight gain of the obese rats was also decreased by the treatment with either PG or GP saponins. These results demonstrate that either alone or mixture of PG and GP have similar degree of effects on hyperglycemia and hyperlipidemia.

[PA2-12] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Effect of recombinant human Granulocyte Macrophage Colony Stimulating Factor mouthwash on chemotherapy induced mucositis

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Oral mucositis is a frequent and significant side effect of both cancer chemotherapy and radiotherapy. Dysphagia due and pain due to oral mucositis can lead to malnutrition and weight loss. The ulcerated

oral mucosa makes the patients more vulnerable to local secondary infections which in turn many aggravate mucositis and systemic infection. The granulocyte macrophage colony stimulating factor has a pleiotropic activity that influences not only proliferation and differentiation of stem cell but also regulates several other cells involved in acute and chronic inflammation and immune responses. This retrospective study was aimed to evaluate the effects of topical rhGM-CSF administration on oral mucositis in cancer patients during or after chemotherapy and radiotherapy. Forty six cancer patients on rhGM-CSF gargle were included for this study who received chemotherapy and/ or radiotherapy. rhGM-CSF in 300ml of normal saline was used for gargling 4 times a day until mucositis grade improved to 0 grade which is functionally normal. Oral mucositis grade and duration were evaluated in related to radiation therapy, infection, use of systemic rhG-CSF, neutropenia, chemotherapy (including 5-FU or not) and nutrition supplement. Total 46 patients were included in this study, mean age 54.5 ± 12.2 years and mean weight 60.7 ± 10.6 Kg. The mean mucositis grade was 2.24 ± 0.69 , and mean duration was 7.6 ± 4.2 days. There was a significant difference in the grading in mucositis severity between infection and radiotherapy ($p=0.014$ and $p=0.015$). But there was no statistically significant differences related to the entire groups. The cost of rhGM-CSF gargling is at least 16 times expensive than any other gargles. rhGM-CSF gargle seems to be effective in healing oral mucositis during and or after chemotherapy or radiation, and application of rhGM-CSF seems to lower the degree of oral mucositis. Although the rhGM-CSF seems to be effective in the control of oral mucositis, it is more expensive than any other gargles. Prospective randomized, double blind studies will be necessary for deciding appropriate effects.

Poster Presentations – Field A3. Hygienics

[PA3-1] [10/18/2001 (Thr) 14:00 – 17:00 / Hall D]

Quantitative analysis of sildenafil from the smuggled Viagra

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Sildenafil, an oral therapy for erectile dysfunction is sold by the name of Viagra. But it has a potential for cardiac risk of sexual activity in patients with preexisting cardiovascular disease. Therefore, sildenafil citrate should not be generally used in men for whom sexual activity is inadvisable because of their underlying cardiovascular status. Namely Viagra is a prescription medication available only from doctors. There was an expectation that Viagra would be sold in great deal, but the market is really low in Korea because its use needed the diagnosis on the erectile dysfunction and doctor's prescription. On the other hand, as its known effects on erectile dysfunction, there have been many smuggled drugs from China which contain sildenafil such as the formation of tablets, capsules and alcoholic drinks. In the case of capsule, it was written in the package that capsules contained terrapin powder or prickly ant as a main component. We couldn't know they had really such components but they had sildenafil with the range of 7.2–59.7mg per capsule. As the counterfeit tablets, they looked after genuine ones in their outward appearance but sildenafil contents was less than written contents (100mg) with the range of 34.6–83.6mg per tablet. We analyzed sildenafil with HPLC/PDA. An isocratic mobile phase was 0.05M triethylamine phosphate (pH 3.0):methanol:acetonitrile=580:250:170. The column (4.6X250mm I.D.) was packed with 5 μ m XTerra RP18 (Waters, U.S.A.). The detector was set at 290nm wavelength. Flow rate was 1ml/min.

[PA3-2] [10/18/2001 (Thr) 14:00 – 17:00 / Hall D]

Effect of Cadmium on mitochondrial function in vascular endothelial cells