[OA-1] [04/21/2000 (Fri) 14:10 - 14:25 / Rm B113, Bldg 26]

Protective Effect of DA-9601, an Artemisia asiatica Extract, on Experimental GERD in Rats

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The effect of DA-9601, an extract of Artemisia asiatica, which is known to possess mucoprotective action either by free radical scavenging or increase of mucus secretion, on experimental gastroesophageal reflux disease (GERD) was investigated in rats. Experimental GERD in rats was devised by the ligature of forestomach and transient stenosis of lower duodenum for 48 hrs. GERD rats were divided into 4 groups: normal, control, low and high dose of DA-9601 (30 and 100 mg/kg). DA-9601 was gavaged twice a day for 3 days before operation. Forty eight hours after operation, all animals were euthanatized and gross finding, mucosal malonedialdehyde (MDA), the electrophoretic mobility shift assay (EMSA) for detection of NFκB activation and histological changes (H&E and immune staining of nitrotyrosine or COX-2 antibody) of esophagus were examined. DA-9601 significantly reduced gross lesion score and tissue MDA compared with GERD control, in a dose-dependent manner ($p<0.05$). DA-9601 also markedly attenuated not only histologic abnormalities but activation of NFκB in esophageal tissue. These results clearly demonstrate that DA-9601 ameliorates macroscopic and hoistologic lesion of experimental GERD either through reducing oxidative stress or by attenuating NFκB involved in inflammation. DA-9601 could be a promising drug for the therapy of GERD.

[OA-2] [04/21/2000 (Fri) 14:25 - 14:40 / Rm B113, Bldg 26]

Beneficial Effect of DA-9601, an Artemisia asiatica Extract, on Dextran Sulfate Sodium-induced Colitis in Rats: Colonoscopic Evaluation

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This study was performed to examine the effects of DA-9601, an Artemisa asiatica extract, on dextran sulfate sodium (DSS)-induced colitis in Sprague Dawley rats. Experimental colitis was induced by supplementing drinking water with 4% DSS (M.W. 40,000) for 5 days. DA-9601 was administered orally at a dose of 10, 30, or 100 mg/kg twice a day for 8 days commencing 3 days before DSS drinking. Colonoendoscopic evaluation (Olympus, Japan) of anesthetized rats was done for three times on days 0, 3, and 5 of DSS drinking. During the experiment, body weight and clinical signs were examined. After sacrifice on day 6, macroscopic and microscopic findings, malondialdehyde (MDA) contents and myeloperoxidase (MPO) activity of affected colon were assessed. Before 5 days of DSS drinking, no colonoscopic alteration was noted. On day 5, however, colonoendoscopic observation showed severely damaged mucosa of colon with edema, diffuse hemorrhagic and ulcers in control animals. In contrast, animals receiving DA-9601 showed only mild edematous change of colonic mucosa. Pathologic examination revealed that DA-9601 significantly attenuated macroscopic and microscopic lesion score, formation of MDA and MPO activity, dose-dependently ($p<0.05$). The results of the present study suggest that DA-9601 can be useful for the prevention of acute flare-up symptoms of inflammatory bowel disease.

[OA-3] [04/21/2000 (Fri) 14:40 - 14:55 / Rm B113, Bldg 26]

Risk Assessment of Aflatoxin B1 in Cereals