

induced arthritis in DBA/1J mice. Mice were immunized with type II collagen emulsified in Freund's complete adjuvant, followed by a booster injection 21 days later. Chondroitin disaccharide, oligosaccharide and intact chondroitin sulfate at respective doses of 50, 300 and 1,200 mg/kg were administered orally once daily beginning 14 days before initial immunization. The index of swelling and hind paw edema was significantly decreased in the group of treatment with chondroitin disaccharide and chondroitin oligosaccharide. Levels of anti-type II collagen antibodies, TNF- α and IL-6 in serum were shown the similar trends. It was also confirmed that chondroitin digestion products including chondroitin disaccharide and a mixture of oligosaccharides, have preventive and/or therapeutic effects compared to the group of arthritis control. The result was clearly demonstrated through histological evaluation of joint tissues.

[PA1-54] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Renal protective effect of Jahagur in STZ induced diabetic rats

Park JungMin^o, Kim YounYoung, Chung SungHyun

College of Pharmacy, Kyunghee University, Seoul 130-701, Korea

Jahagur(JHG) is an oriental medicine which has been used to treat woman's disease. We have studied the renal protective effect of JHG in STZ(75mg/kg in citrate buffer) induced diabetic rats. Rats were grouped and treated for 2 weeks as follow : control group was injected saline by s.c , treated groups were injected JHG by s.c , positive control group received captopril(CAP), 50mg/kg by oral administration. JHG did not lower plasma glucose level. JHG and CAP-treated rats exhibited lowered urinary albumin excretion and blood urea nitrogen, indicative of renal glomerular damage, as compare to the control. mRNA of TGF- β and protein of fibronectin in kidney were investigated. There were significant difference between control and treated group. We examined the morphology of glomerulus by H&E staining. From these results we may conclude that JHG showed the renal protective effect and it suppressed Fibronectin expression in kidney .

[PA1-55] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Comparative Study of KHU-1 and Simplified Prescription of KHU-1(KHU-2) in Ob/Ob mice

Kim YounYoung^o, Han KiSun, Chung SungHyun

College of Pharmacy, Kyunghee University, Seoul 130-701, Korea

KHU-1, which is on record in chinese ancient writings (Entrance to Medical Science), has been known as improvement in the functions of gastrointestinal tract and kidney. We had studied antidiabetic effect and mechanism of KHU-1 in male ZDF rats, KHU-1 had shown the excellent hypoglycemic activity. In these studies, we have tried to simplify prescription of KHU-1. The first stage, prescription was divided into 4 parts and anti-hyperglycemic activities of each part were investigated In high-fat diet induced diabetic mice. We prepared simplified prescription with just herbs which have hypoglycemic activity. Subsequently, we have made a comparative study of KHU-1 and simplified prescription of KHU-1(KHU-2) in male Ob/Ob mice. Mice were grouped and treated for 9 weeks as follows : lean control (C57/BL6J black mice) and Ob/Ob control groups received powdered standard chow , KHU-1 group was fed with a diet of chow supplemented with 8 g/kg KHU-1 , KHU-2 group was fed with a diet of chow supplemented with 4 g/kg KHU-2(KHU-2 form 50% of KHU-1). KHU-2 lowered plasma glucose from a week after treatment and the hypoglycemic activity was superior to KHU-1. Total cholesterol, triglyceride, free fatty acid and LDL cholesterol were decreased and HDL cholesterol was increased similarly in KHU-1 and KHU-2-treated groups at the end of treatment. While the Ob/Ob control group showed elevated level of insulin and C-peptide concentration, KHU-1 and KHU-2-treated groups lowered insulin and C-peptide concentration respectively. In the mechanism study, mRNA and protein expression of GLUT-4 and PPAR- γ in muscle and epididymal fat were studied by RT-PCR and western blot. We have also investigated Insulin contents in pancreas by immunohistochemistry. We may suggest