

The adducts of lipid peroxidation and related aldehydic end are mediators of chronic poisoning and affect the development of chronic liver damage leading to fibrosis and cirrhosis. Substances delayed or suppressed lipid peroxidation could have an antioxidant and protective effect in liver disease. In this study, it was attempted to find out above mentioned effect of Solanum lycopersicum investigated in CCl₄ induce liver fibrosis model.

The female Sprague–Dawley rats were divided into 3 groups (Normal, AC: CCl₄ treated group AC–SL: CCl₄ and Solanum lycopersicum treated group) and liver fibrosis was developed by CCl₄ administration. The rats were observed for 4 weeks and sacrificed. The liver and blood were prepared and used for quantitative measurement of enzyme activity, MDA and SOD.

As a result, the level of clinical parameters in sera of AC, AC–SL group ($p < 0.005 \sim 0.001$), when compared to AC group, AC–SL group showed significantly lower value of AST, ALT, ALP, BUN and total–bilirubin ($p < 0.05 \sim 0.001$). The metabolite of lipid peroxidation (MDA) in liver tissue increased significantly in both of CCl₄ group ($p < 0.0001$). And the concentration of MDA in liver of AC–SL group decreased significantly 24.8% compared with AC group ($p < 0.0001$). The value of SOD appeared 4.35 ± 0.12 in normal group, 4.07 ± 0.03 in AC and 4.32 ± 0.14 U/0.1g liver in AC–SL group, which the value of AC–SL group was significantly increased compared to AC group ($p < 0.01$).

In conclusion, Solanum lycopersicum extract may have the improvement of hepatic function and the antioxidative effect in experimental liver fibrosis.

[PA2–5] [04/17/2003 (Thr) 14:00 – 17:00 / Hall P]

Convenient Therapy with Specially Designed Radionuclide, ¹⁶⁶Ho Skin Patch for Skin Cancer

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¹⁶⁶Ho, a β -emitting radionuclide, was incorporated within polyurethane film for possible application for the therapy of skin cancers. The aim of this study was to investigate skin irritant after radiation with ¹⁶⁶Ho patch in rabbits and to estimate the efficacy of this therapy for skin cancer patients. Six NZW rabbits were used for skin irritant in this study. The dorsal hair of rabbits was removed with an electric clipper and blade. Three different radiation doses (control, 35Gy and 70Gy) were applied on skin of the shaved rabbit. Two weeks after radiation, desquamation, erythema or erosion developed in applied sites but these acute radiation reactions healed gradually. For the evaluation of the efficacy of this therapy, 26 sites of Bowen's disease in 12 patients, 8 lesions of basal cell carcinoma in 8 patients, 3 lesions of squamous carcinoma in 3 patients and 18 lesions of Kaposi sarcoma in 4 patients were treated with ¹⁶⁶Ho patches (45–95 year old; 0.5–8 cm in size). The patches were applied to the surface of skin cancers for 30–60 min for a total radiation dose of 35 or 80 Gy according to the type of cancer. All of 26 lesions of Bowen's disease, 6 of 8 lesions of basal cell carcinoma, all of 3 lesions of squamous carcinoma and 17 of 18 lesions of Kaposi sarcoma showed complete response with single treatment. It was concluded from these studies that the ¹⁶⁶Ho patch is a safe, convenient, cosmetic and effective therapeutic modality without adverse effects on the surrounding normal tissue and bone.

[PA2–6] [04/17/2003 (Thr) 14:00 – 17:00 / Hall P]

Development of a Radiopharmaceutical using ¹⁶⁶Ho–chitosan Complexes against Prostate Cancer