



Effect of flavonoid compounds extracted from *Iris* species in prevention of carbon tetrachloride-induced liver fibrosis in rats

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ABSTRACT. We investigated the effect of flavonoid compounds extracted from species of genus *Iris* L. on carbon tetrachloride (CCl₄)-induced rat liver fibrosis. Thirty Sprague-Dawley rats were randomly divided into normal control group, liver fibrosis model group, and drug treatment group (N = 10 each). Next, 0.2 mL/100 g CCl₄ was subcutaneously injected for 6 weeks in both model and treatment rats to generate the liver fibrosis model. In the control group, an equal volume of castor oil was injected subcutaneously. Rats in the treatment group also received 100 mg·kg⁻¹·day⁻¹ flavonoid compounds via gastric tubes. After 6 weeks, rats were sacrificed, and their liver tissues were examined for pathological changes, including alanine aminotransferase, aspartate aminotransferase, total bilirubin, hyaluronic acid, laminin, and procollagen type-3. Liver tissues from control rats showed no significant pathological changes, while model animals showed significant liver fibrosis. In the treatment group, liver fibrosis significantly decreased compared to the model group (P < 0.05). Liver fibrotic indices, including hyaluronic acid, laminin, and procollagen type-3, in treatment rats were all significantly lower than those in the

model group ($P < 0.05$), but not significantly different compared to the normal group ($P > 0.05$). Other liver function indices, including alanine aminotransferase, aspartate aminotransferase, and total bilirubin, in treatment rats were also significantly lower than those in model rats ($P < 0.01$) but higher than those in control animals ($P < 0.05$). Flavonoid compounds extracted from *Iris* plants showed significant inhibitory effects on CCl_4 -induced rat liver fibrosis.

Key words: CCl_4 ; Flavonoid compounds; Liver fibrosis