

Effect of Korean Raisin, *Hovenia dulcis* Thunb. Extracts on the High Fat Diet Supplied Mice

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The pharmacological effects of aqueous (HDw) and methanolic (HDm) extracts of *Hovenia dulcis* were observed in using 40% beef tallow AIN-76A purified rodent High Fat Diet(HFD) supplied ICR mice. In this study, oral administration of HDw or HDm extracts was initiated 1 week after initiation of HFD, once a day for 12 weeks at 50,100 and 200 mg/kg in a volume of 10 ml/kg (of body weight) using sterilized distilled water as vehicle. After end of 12 weeks- dosing, the effects of HD extracts 2 types were compared to those of silymarin 100 mg/kg and metformin 250 mg/kg.

The results are as follows :

1. AST, ALT, T-Chol, triglyceride, glucose, LDL and HDL significantly ($p<0.01$ or $p<0.05$) decreased in silymarin 100 mg/kg, metformin, 250mg/kg of HDw, 100, 200 mg/kg of HDm compared to that of HFD control.
2. Liver weight increases were significantly ($p<0.01$ or $p<0.05$) inhibited in silymarin 100 mg/kg, metformin 250 mg/kg, 200 mg/kg of HDw, 100 and 200 mg/kg of HDm compared to that of HFD control.
3. Body weight, gains, periovarian fat weights, fat adiponectin contents, serum leptin and adiponectin were significantly ($p<0.01$ or $p<0.05$) decreased in silymarin 100 mg/kg, metformin 250 mg/kg, 200 mg/kg of HDw, 100 and 200 mg/kg of HDm compared to that of HFD control.
4. On histopathological evaluations, liver steatohepatic changes were significantly($P<0.01$, $P<0.05$) inhibited and decreased of the thickness of deposited abdominal fat pad and adipocyte diameters in silymarin 100 mg/kg, metformin 250 mg/kg, 200 mg/kg of HDw, 100 and 200 mg/kg of HDm compared to that of HFD control.

Therefore we concluded that, steatohepatitis, hyperlipemia, obese and related hyperglycemia induced by HFD supply were dramatically inhibited by 84 days of continuous treatment of 200 mg/kg of HDw, 100 and 200 mg/kg of HDm

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