THE ADD-ON EFFECTS OF GYNOSTEMMA PENTAPHYLLUM ON NONALCOHOLIC FATTY LIVER DISEASE

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Context • Other than weight reduction by dieting or physical activity, there are no well-documented medical treatments for fatty liver disease.

Objective • To evaluate the efficacy of the add-on Gynostemma pentaphyllum (GP) in research subjects with nonalcoholic fatty liver disease.

Design • A randomized, single-blind, controlled clinical trial.

Setting • Hospital-based clinic.

Patients • Fifty-six research subjects who were diagnosed with nonalcoholic fatty liver by abdominal ultrasound scanning.

Interventions • The treatment group and the control group followed a controlled diet for 2 months. After 2 months, the treatment group continued to diet and received 80 ml GP extraction for 4 months; the control group continued to diet and received a placebo capsule for 4 months.

Main Outcome Measures • Body mass index (BMI), biochemistry data, and fatty liver score were measured at baseline, at 2 months, and at 6 months.

Results • After 2 months of dieting, BMI and most biochemistry data decreased in both study groups. There were no significant differences in BMI or biochemistry data at month 2 between the 2 study groups. At month 6, BMI, triglyceride, aspartate aminotransferase (AST), alanine aminotransferase, alkaline phosphatase, insulin (ALP), insulin resistance index (HOMA-IR), and fatty liver score were reduced in both groups. The treatment group saw significant reductions in BMI, AST, ALP, insulin, and HOMA-IR, however. Changes in uric acid levels in the 2 groups from month 2 to month 6 were statistically significant (P = .028).

Conclusion • GP is an effective adjunct treatment to diet therapy for patients with nonalcoholic fatty liver disease. (Altern Ther Health Med. 2006;12(3):34-39)

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Nonalcoholic fatty liver disease, a common chronic liver disorder, is strongly associated with metabolic syndromes that include hyperinsulinemia, increased plasma triglyceride (TG), decreased high-density lipoprotein cholesterol (HDL-C), hypertension, glucose intolerance, and abdominal obesity. More importantly, all of the metabolic syndromes are highly associated with cardiovascular disease. Preventing the deposition of visceral fat or the development of fatty liver, therefore, may inhibit metabolic syndrome and indirectly reduce the risk of cardiovascular disease.

Currently, no well-documented medical treatment exists for fatty liver disease. Weight reduction by a controlled diet or increased physical activity is generally associated with improvements in liver morphology and function. Ginseng, a botanical drug, has been found to effectively reduce total cholesterol (TC) and TG concentrations, as well as suppress fatty formation in hepatectomized rats. Gynostemma pentaphyllum (GP) is named "Southern ginseng" because it has similar effects of ginseng and grows in southern China. Gypenoside, a saponins extract from GP, has been found to exhibit hepatoprotective and anti-fibrotic effects on chronic liver injuries. Animal studies involving water extract of GP have reported antioxidative activity and effects in the prevention of liver injury. Consequently, GP may be useful in treating fatty liver. We conducted a randomized, single trial to investigate the add-on effects of GP on plasma lipids, liver enzymes, and metabolic parameters in patients who had nonalcoholic fatty liver disease and were to undergo diet therapy.