One-year consumption of a grape nutraceutical containing resveratrol improves the inflammatory and fibrinolytic status of patients in primary prevention of cardiovascular disease.


Source
Research Group on Quality, Safety, and Bioactivity of Plant Foods, CEBAS-CSIC, Murcia, Spain.

Abstract
The search for complementary treatments in primary prevention of cardiovascular disease (CVD) is a high-priority challenge. Grape and wine polyphenol resveratrol confers CV benefits, in part by exerting anti-inflammatory effects. However, the evidence in human long-term clinical trials has yet to be established. We aimed to investigate the effects of a dietary resveratrol-rich grape supplement on the inflammatory and fibrinolytic status of subjects at high risk of CVD and treated according to current guidelines for primary prevention of CVD. Seventy-five patients undergoing primary prevention of CVD participated in this triple-blinded, randomized, parallel, dose-response, placebo-controlled, 1-year follow-up trial. Patients, allocated in 3 groups, consumed placebo (maltodextrin), a resveratrol-rich grape supplement (resveratrol 8 mg), or a conventional grape supplement lacking resveratrol, for the first 6 months and a double dose for the next 6 months. In contrast to placebo and conventional grape supplement, the resveratrol-rich grape supplement significantly decreased high-sensitivity C-reactive protein (-26%, p = 0.03), tumor necrosis factor-α (-19.8%, p = 0.01), plasminogen activator inhibitor type 1 (-16.8%, p = 0.03), and interleukin-6/interleukin-10 ratio (-24%, p = 0.04) and increased anti-inflammatory interleukin-10 (19.8%, p = 0.00). Adiponectin (6.5%, p = 0.07) and soluble intercellular adhesion molecule-1 (-5.7%, p = 0.06) tended to increase and decrease, respectively. No adverse effects were observed in any patient. In conclusion, 1-year consumption of a resveratrol-rich grape supplement improved the inflammatory and fibrinolytic status in patients who were on statins for primary prevention of CVD and at high CVD risk (i.e.,
with diabetes or hypercholesterolemia plus ≥1 other CV risk factor). Our results show for the first time that a dietary intervention with grape resveratrol could complement the gold standard therapy in the primary prevention of CVD.

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