

Clinical Update

Coenzyme Q study backs heart health claims

Supplementation with coenzyme Q10 (CoQ10) may boost naturally occurring antioxidant enzymes and endothelial function in patients with coronary artery disease (CAD), researchers have found.

(European Heart Journal, July 2007)

The randomized, double-blind, placebo controlled trial, published in the European Heart Journal, is yet another positive result for CoQ10 and its heart health benefits. The study, led by Luca Tiano from Italy's Polytechnic University of the Marche, divided 38 CAD patients into two groups, with one receiving 100 mg/d of CoQ10 and the other a placebo for one month.

CAD reduces extracellular superoxide dismutase (ecSOD), a major antioxidant enzyme system of blood vessel walls. However, the CoQ10-supplemented group had more ecSOD at the end of the trial than the placebo group. The improvements were particularly significant in patients with low initial endothelium-bound ecSOD, who were more prone to oxidative stress, the study found.

The results found that ecSOD activity raised from 17.3±1.7 to 22.4±1.3 U/mL/min in the treated group, whereas there was only a slight change in the placebo group, from 16.6±1.6 to 17.3±1.6 U/mL/min.

"The results of the present investigation indicate that the oral CoQ10 supplementation in CAD patients has beneficial effects, which can be ascribed either to the bioenergetic role of the quinone or to its antioxidant properties," the study said.

"Moreover, recent data from our group demonstrated that the CoQ10 administration improves cardiac contractility in ischaemic heart disease patients, measured by low dobutamine stress echocardiography."

"Although the effect of CoQ10 on the ED relaxation has already been shown in patients with type II diabetes and ischaemic heart disease, the effect of CoQ10 on raising ecSOD levels represents a novel observation."