

Effect of hydrosoluble coenzyme Q10 on blood pressures and insulin resistance in hypertensive patients with coronary artery disease

RB Singh, MA Niaz, SS Rastogi, PK Shukla and AS Thakur

NKP Salve Institute of Medical Science, Nagpur and Heart Research Laboratory and Centre of Nutrition, Medical Hospital and Research Centre, Moradabad, India

In a randomised, double-blind trial among patients receiving antihypertensive medication, the effects of the oral treatment with coenzyme Q10 (60 mg twice daily) were compared for 8 weeks in 30 (coenzyme Q10: group A) and 29 (B vitamin complex: group B) patients known to have essential hypertension and presenting with coronary artery disease (CAD). After 8 weeks of follow-up, the following indices were reduced in the coenzyme Q10 group: systolic and diastolic blood pressure, fasting and 2-h plasma insulin, glucose, triglycerides, lipid per-

oxides, malondialdehyde and diene conjugates. The following indices were increased: HDL-cholesterol, vitamins A, C, E and beta-carotene (all changes $P < 0.05$). The only changes in the group taking the B vitamin complex were increases in vitamin C and beta-carotene ($P < 0.05$). These findings indicate that treatment with coenzyme Q10 decreases blood pressure possibly by decreasing oxidative stress and insulin response in patients with known hypertension receiving conventional antihypertensive drugs.

Keywords: hypertension; coronary disease; insulin resistant antioxidant vitamin; oxidant stress