Can pomegranate juice improve coronary blood flow?

Forty-five patients (mean age, 69 years) with coronary heart disease and myocardial ischemia were randomly assigned to receive, in double-blind fashion, 240 ml/day of pomegranate juice or a placebo drink for three months. The placebo was a modified sports beverage (contents not specified) similar in caloric content, flavor, and color to the pomegranate juice. To measure stress-induced ischemia, participants underwent electrocardiographic-gated myocardial perfusion single-photon emission computed tomographic technetium-99m tetrofosmin scintigraphy at rest and during stress, at baseline and three months. After three months, compared with baseline, the extent of stress-induced ischemia decreased by 17.8% in the pomegranate-juice group and increased by 20.3% increase in the placebo group. The difference in the change between groups was statistically significant (p < 0.05), but it was not clear whether the improvement in the pomegranate-juice group was significant compared with the baseline value. The mean number of angina episodes decreased by 50% in the pomegranate-juice group and increased by 38% in the placebo group, but this difference was not statistically significant.

Comment: Pomegranate juice contains antioxidants such as polyphenols, tannins, and anthocyanins that may have anti-atherosclerotic properties. In a previous study of patients with carotid atherosclerosis, consumption of 250 ml/day of pomegranate juice decreased intima-media thickness of the common carotid arteries by a mean of 35%, as compared with an increase of nine percent in the control group (Clin Nutr 2004;23:423-33). This improvement, which was suggestive of a regression of atherosclerosis, was maintained after a total of three years in patients who continued to drink pomegranate juice.

In the new study, pomegranate juice appeared to improve stress-induced myocardial ischemia in patients with coronary heart disease. However, the difference in the change between groups was due in large part to a worsening in the placebo group. It is possible that some component of the sports drink had a deleterious effect on cardiac metabolism. If that were the case, then the true effect of pomegranate juice would have been smaller than that reported and may not have been statistically significant. Nevertheless, the results are consistent with a beneficial effect of pomegranate juice in patients with coronary heart disease.


Pantethine lowers cholesterol and triglyceride levels

Twenty-nine patients with hypertriglyceridemia (type IV hyperlipoproteinemia) or elevations of both LDL-cholesterol and triglyceride levels (type IIB hyperlipoproteinemia), and three patients with an isolated reduction of HDL cholesterol were randomly assigned to receive, in double-blind fashion, pantethine (300 mg three times a day) or placebo for eight weeks, and then the alternate treatment for an additional eight weeks. In type IIB patients, pantethine lowered total serum cholesterol and LDL cholesterol by 13.5% and increased HDL cholesterol by 10%. Pantethine did not increase HDL cholesterol in type IV patients or in those with an isolated reduction of HDL. In both type IIB and type IV patients, plasma triglycerides were reduced by about 30% if pantethine was given first, and by 13.0-17.8% if pantethine was given after placebo.

Comment: Pantethine is the stable disulfide form of pantetheine, which is a metabolite of pantethenic acid and a major component and precursor of coenzyme A. Numerous studies have shown that pantethine can lower LDL-cholesterol and triglyceride levels and increase HDL-cholesterol levels. Although the lipid-lowering effect of pantethine is not as pronounced as that of statin drugs, it is non-toxic and can be used in combination with other nutritional supplements and dietary changes, with the potential for additive or synergistic effects. In addition to its favorable effect on lipid levels, pantethine has been shown to inhibit platelet aggregation.

Other natural substances that can reduce serum cholesterol include niacin, chromium, calcium, policosanol, beta-sitosterol, psyllium, and red yeast rice. Foods that have been shown to lower cholesterol levels include soy, oat bran or whole oats, whole rye, garlic, onion, rice bran oil, grapefruit and apples (sources of pectin), raw carrots, nuts (including walnuts, almonds, pecans, hazelnuts, and macadamia nuts), yogurt, high-chromium brewer's yeast, and alfalfa sprouts.

Curcumin for inflammatory bowel disease

Five patients (aged 28-54 years) with ulcerative proctitis or proctosigmoiditis, who had complained of symptoms for 1-32 years, received 550 mg of curcumin twice a day for one month, and then 550 mg three times a day for one month. All five patients improved, with reductions in concomitant medication use in four. The improvement in Global score ranged from 15% to 75%. Five patients with Crohn's disease received 360 mg of curcumin three times a day for one month and then 360 mg four times a day for two months. Four of five patients improved, as demonstrated by decreases in Crohn's Disease Activity Index scores of 12.9-44% and reductions in sedimentation rates of 17-71%.

Comment: Curcumin is a component of the common spice, turmeric. Animal studies have demonstrated an anti-inflammatory effect of curcumin, and an uncontrolled trial in humans suggested that it might be beneficial in the treatment of rheumatoid arthritis. The results of the present study suggest that curcumin may also be an effective treatment for inflammatory bowel disease. A larger, placebo-controlled trial would be worthwhile.
