

VASCULAR DISEASE

Uric Acid, MI, and Stroke

An elevated serum uric acid level is a strong risk factor for myocardial infarction (MI) and stroke, say researchers from Erasmus Medical Center, Rotterdam, the Netherlands. This is based on findings from their prospective, population-based study, part of the Rotterdam Study on chronic and disabling diseases.

During an average eight-year follow-up, 515 of 4,385 participants developed coronary heart disease (194 MIs) and 381 had a stroke (205 ischemic, 46 hemorrhagic, and 130 unspecified strokes). High serum uric acid levels were strongly and significantly associated with higher risk: Hazard ratios (age- and sex-adjusted) for the highest versus the lowest quintile of uric acid levels were 1.68 for coronary heart disease, 1.87 for MI alone, and 1.57 for all types of strokes. Adjustment for other vascular risk factors attenuated the associations only slightly.

The effect of uric acid on stroke risk was lower in patients with hypertension. The researchers say this finding fits with those of animal studies, in which hypertension was driven by renal mechanisms independent of serum uric acid levels once renal disease was established.

Source: *Stroke*. 2006;37:1503-1507.

ALTERNATIVE THERAPIES

Open Wide and Say "Om"

In a study of 103 patients with stable coronary heart disease (CHD), researchers from Cedars-Sinai Medical Center, New York, NY; the University of Southern California Keck School

of Medicine, Los Angeles; and the Maharishi University of Management, Maharishi Vedic City, IA found that 16 weeks of transcendental meditation (TM) improved blood pressure (BP) and insulin resistance components of the metabolic syndrome as well as cardiac autonomic tone.

Matched for frequency and time, patients were assigned randomly either to the TM group or to a health education (HE) group that received lessons on CHD risk factors and the impact of stress, diet, and exercise. A total of 84 patients completed the study.

After adjusting for age, sex, baseline systolic BP, myocardial infarction history, baseline depression and anger, exit body mass index, and physical activity level, the researchers found that systolic BP dropped 3.4 mm Hg in the TM group, versus 2.8 mm Hg in the HE group. Insulin resistance in the TM and HE groups decreased by 0.75 and 0.52, respectively.

The researchers note that, while there were no differences in reported life stress at baseline and exit between the two groups, the HE group was "significantly more depressed and angry compared with the TM group at trial entry, and this did not change at exit."

Source: *Arch Intern Med*. 2006;166:1218-1224.

SURGICAL CARE

CRP: A Clue to Postsurgical Course?

It's already known that C-reactive protein (CRP) values rise sharply immediately after uncomplicated spinal surgery, reach a peak about two days later, and then decline rapidly. In fact, a second spike in CRP levels (between four and seven days after surgery) has

been shown to be a sensitive marker for infection. But, when the infection has cleared, do the CRP levels react accordingly? Researchers from the University of Pittsburgh Medical Center, Pittsburgh, PA decided to find out if monitoring CRP levels and erythrocyte sedimentation rate (ESR) might help predict which patients would bounce back fastest from postsurgical infection.

The authors retrospectively reviewed the medical records of 21 patients who acquired postoperative wound infections after spinal surgery and subsequently received IV antibiotic therapy for six to eight weeks. They looked at CRP and ESR levels that were measured at diagnosis and at four, seven, and 20 weeks.

At diagnosis, the average CRP value for all patients was 11.7 mg/dL. After four weeks of antibiotic treatment, 16 patients showed clinical improvement, while the other five continued to have signs and symptoms of infection. Among the 16 early responders, the average CRP value declined dramatically to 0.3 mg/dL. By contrast, the five late responders had an average CRP value of 7.3 mg/dL. By 20 weeks, the late responders' average CRP value had dropped to a level comparable with that of the early responders.

ESR levels, on the other hand, varied widely and did not show a rapid decrease that coincided with infection healing. In fact, the researchers point out, ESR levels may remain elevated for weeks following postsurgical infection, despite clinical improvement and normal CRP levels. Thus, they propose that CRP is a better marker than ESR for following the course of postoperative wound infections after spinal surgery. ●

Source: *Spine J*. 2006;6:311-315.