

CLINICAL CAPSULES

Cardiac Power Index Predicts Stroke

An index of cardiac power during exercise can be used to identify men at risk for stroke, according to Sudhir Kurl, M.D., of the University of Kuopio (Finland) and associates.

Two measures of cardiorespiratory fitness currently are used in stratifying stroke risk: maximal oxygen uptake (VO_{2max}) during exercise, which indicates cardiac capacity, and systolic blood pressure at rest, which indicates peripheral resistance. The researchers proposed combining these measures into an "index of exercise cardiac power (ECP)" to enhance the prognostic value of either measure alone. The ECP index is the ratio of VO_{2max} to peak systolic blood pressure during exercise.

In their population-based study of 1,761 healthy Finnish men (mean age 52 years), 91 had a stroke during an average of 12 years of follow-up. Men with the lowest ECP index values, indicating low cardiac power, had nearly three times the risk of stroke as did those with the highest ECP index values, indicating greater cardiac power (Stroke 2005;36:820-4).

The ECP index was found to be one of the strongest predictors of stroke, as predictive as body mass index, diabetes, hypertension, and smoking. It also was a better predictor than exercise capacity alone.

Amiodarone, Sotalol Equally Effective

Amiodarone and sotalol appear to be equally effective in converting atrial fibrillation to sinus rhythm, reported Bramah N. Singh, M.D., of the Veterans Affairs Medical Center, West Los Angeles, and associates.

"The optimal long-term drug strategy is controversial" in atrial fibrillation (AF), the researchers noted. They conducted a multicenter clinical trial between April 1998 and October 2002 in which 267 patients were randomly assigned to receive amiodarone, 261 to receive sotalol, and 137 to receive placebo (N. Engl. J. Med. 2005;352:1861-72).

The rate of conversion to sinus rhythm was 79.8% for amiodarone and 79.9% for sotalol, compared with 68.2% for placebo. Both agents were markedly more effective than placebo at preventing recurrence of AF. There were no differences between the two drugs in mortality or rates of adverse events except for minor bleeding episodes—more common with amiodarone.

Patients in whom sinus rhythm was restored scored significantly higher than did those with persistent AF on measures of physical functioning, general health, and social functioning, the researchers noted.

H. pylori Tied to Vascular Inflammation

Chronic asymptomatic infection with *Helicobacter pylori* appears to contribute to atherosclerosis by increasing vascular inflammation and impairing vasodilation, according to Tetsuya Oshima, M.D., and associates at Hiroshima (Japan) University Graduate School of Biomedical Sciences.

In a study of 81 healthy Japanese men who were nonsmokers (average age 40 years), serum levels of C-reactive protein and soluble intercellular adhesion molecule, both of which are markers for endothelial activation and vascular inflammation, were markedly higher in subjects

who were seropositive for *H. pylori* than in men who were seronegative. The infection also attenuated flow-mediated vasodilation, they reported (J. Am. Coll. Cardiol. 2005;45:1219-22).

In contrast, there were no correlations between the vascular parameters and seropositivity for cytomegalovirus or *Chlamydia pneumoniae*.

"We hypothesize that chronic infection with *H. pylori* directly or indirectly induces a persisting systemic and vascular inflammation and endothelial dysfunction," the researchers said.

Folate Improves Coronary Vasodilation

High-dose folic acid acutely improves coronary vasodilation in patients with coronary artery disease, reported Ahmed Tawakol, M.D., and his associates at Massachusetts General Hospital, Boston.

Folate is known to improve vasodilation in the peripheral circulation, but its effect on dilation within the heart in people who have ischemic heart disease hadn't been tested. In a preliminary study, the investigators used PET scans to assess myocardial blood flow in 14 such patients after they ingested either folate syrup or placebo syrup.

The folate did not affect blood flow in

normal areas of the patients' hearts, but increased vasodilator-stimulated blood flow by 49% in ischemic areas. It also raised dilator reserve by 83% in ischemic areas without affecting dilator reserve in normal areas.

Folate also lowered arterial blood pressure independently of its ability to decrease homocysteine (J. Am. Coll. Cardiol. 2005;45:1580-4).

These results raise the possibility that long-term folate therapy at higher doses than are usually taken might reduce ischemia as well as lower blood pressure in CAD patients, the researchers said.

—Mary Ann Moon

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