Clinical Capsules

ESR Can Predict Heart Failure

An elevated erythrocyte sedimentation rate was found to be a good predictor of heart failure, independent of established risk factors for the condition, reported Erik Ingelsson, M.D., of Uppsala (Sweden) University, and his associates.

ESR, a marker for systemic inflammation, is known to predict coronary disease but had not been assessed as a marker for heart failure. In this community-based study of 2,314 middle-aged men, the subjects were free of heart failure, MI, and valvular disease at study entry and were followed for a median of 30 years; 282 developed heart failure during that time.

A high ESR predicted heart failure independently of hypertension, diabetes, left ventricular hypertrophy, smoking, body mass index, and cholesterol level. "The diagnostic capacity of ESR as a test for incident [heart failure], in terms of sensitivity and specificity, was comparable with that of hypertension," they said (J. Am. Coll. Cardiol. 2005;45:1802-6).

Given the long lag time they found between an initial high ESR result and the development of heart failure, it appears that inflammation is a key factor early in the disease process, the researchers added.

PCI, CABG for Cardiogenic Shock

Both percutaneous coronary interventions and coronary artery bypass grafting are seriously underused in patients with MI complicated by cardiogenic shock, according to a nationwide survey.

The American College of Cardiology and the American Heart Association revised their guidelines in 1999, elevating early mechanical intervention for cardiogenic shock to a class I recommendation for patients younger than 75 with an ST-elevation left bundle-branch block acute MI. However, a national database that has tracked practice patterns and MI outcomes since 1990 showed that physicians have been slow to comply with this change and had only marginally increased the use of PCI and CABG in this patient group by early 2004, said Anvar Babaev, M.D., of New York University, New York, and colleagues (JAMA 2005;294:448-54).

The database included nearly 300,000 MI patients treated at 775 hospitals with revascularization capability. Of these patients, more than 25,000 (8.6%) had cardiogenic shock. Mortality clearly decreased with increasing use of revascularization, illustrating the benefit of early mechanical intervention. But it appears that physicians may still be reluctant to try these interventions in high-risk patients, the investigators said.

Marker Signals CAD in Renal Disease

For patients with kidney disease, a high serum level of N-terminal pro-B-type natriuretic peptide reflects underlying ischemic heart disease, even when the patient has no cardiac symptoms, according to Christopher R. deFilippi, M.D., and his associates at the University of Maryland, Baltimore.

The significance of elevated NT-proBNP levels in this patient population has been uncertain because clearance of the peptide was thought to depend on renal function. But in their study of 207 patients with different degrees of renal insufficiency, NT-proBNP was found to be a powerful indicator of ischemic heart disease and left ventricular hypertrophy, independent of the degree of renal dysfunction and of known cardiac risk factors such as advanced age and diabetes, the researchers said (Am. J. Kidney Dis. 2005;46:35-44).

Further study is needed to determine whether NT-proBNP screening would be worthwhile for detecting heart disease in the large population of kidney patients who have no symptoms but are at very high risk for cardiac events, they noted.

Assessing Aspirin 'Resistance'

Platelet aggregation testing is not sufficient to identify people with so-called aspirin resistance, but platelet function analysis may be, according to Rocio Gonzalez-Conejero, Ph.D., of the University of Murcia (Spain), and associates.

They evaluated several lab tests that have been proposed for measuring aspirin resistance, in a study of 24 healthy white subjects with a mean age of 35 years. Four subjects were known to have genetic variations cited by other researchers as possible predisposers to aspirin resistance.

All subjects showed maximal platelet aggregation before taking aspirin therapy; aggregation was inhibited by more than 90% in all of them with a 100-mg dose of aspirin. "Thus, according to this test, all individuals can be classified as normal responders to aspirin 100 mg," the investigators said (Stroke 2005;36:276-80).

In contrast, results on the platelet function analyzer–100 showed that eight subjects (33%) could be considered nonresponders, which is similar to the overall rate of aspirin resistance reported in several other studies. Even these "resistant" subjects showed the appropriate platelet response when the aspirin dose was raised to 500 mg, the researchers noted.

—Mary Ann Moon