CLINICAL CAPSULES

BP Too High in Kidney Disease

Primary care physicians often fail to properly control blood pressure of patients with kidney disease, prescribing too few antihypertensive drugs and inadequate diuretic therapy, reported Roberto Minutolo, M.D., of the Second University of Naples, and his associates.

The researchers evaluated the adequacy of blood pressure control in 445 hypertensive patients with mild to severe chronic kidney disease. Cardiovascular risk is very high in such patients, and intensive antihypertensive treatment is known to prevent CV events in them, the investigators said (Am. J. Kidney Dis. 2005:46:18-25).

Like most people with kidney disease, 259 of these patients were managed solely by primary care physicians. The remaining 186 were treated by nephrologists at a hospital outpatient clinic. Patients in the former group were nearly three times more likely to fall short of the target blood pressure of 130/80 mm Hg.

Primary care physicians prescribed fewer antihypertensive drugs (1.9 per patient, compared with 2.5 per patient for nephrologists) and almost exclusively prescribed thiazides for diuresis, while the nephrologists prescribed furosemide. Primary care physicians also prescribed inadequate doses of both antihypertensive and diuretic drugs, compared with nephrologists.

Postop Renal Dysfunction in CABG

N-acetylcysteine did not prevent postoperative renal dysfunction in a randomized clinical trial of patients undergoing coronary artery bypass graft with cardiopulmonary bypass, reported Karen E.A. Burns, M.D., of the University of Toronto, and her associates.

N-acetylcysteine is known to attenuate ischemic declines in renal function, including the kidney complications that result from exposure to contrast dyes. Because cardiopulmonary bypass during CABG also is associated with renal complications, the researchers studied whether perioperative intravenous administration of the agent would preserve renal function in patients at risk for kidney complications.

In their study, 148 patients were randomly assigned to receive N-acetylcysteine and 147 to receive placebo infusions during CABG. There were no significant differences between the two groups in the number of patients who developed renal dysfunction (approximately 29% in both groups) or in the number who required renal therapy. Similarly, there were no differences between the two groups in the number of adverse events, the need for ICU care, or the length of hospital stay, the investigators said (JAMA 2005:294:342-50).

BNP Helps Identify CHF

When patients present to the emergency department with dyspnea of unknown origin, B-type natriuretic peptide level is better than echocardiography in identifying or excluding heart failure as the cause, according to Philippe Gabriel Steg, M.D., of Hopital Bichat-Claude Bernard, Paris, and his associates.

Accurate diagnosis or exclusion of HF is often difficult in patients who present with acute dyspnea, "especially in elderly or obese patients, given the frequency of comorbidities such as COPD," the researchers noted. In their study of 709 such patients who underwent both echocardiographic assessment of left ventricular function and blood sampling to determine BNP level, the sensitivity of echocardiography was 70% and the specificity was 77% in diagnosing HF. For BNP, the sensitivity was 89% and the specificity was 73%.

The proportion of patients who were correctly diagnosed was 55% for EF determined by echocardiography alone, 67% for BNP assessment alone, and 82% when the two variables were considered together. This marked additive diagnostic value "strongly suggest[s] the value of combining both methods," the investigators said (Chest 2005;128:21-9).

Dietary Fish Lowers Inflammation

Fish consumption shows a strong inverse correlation with levels of several inflammatory markers that have been associated with cardiovascular disease, according to Antonis Zampelas, Ph.D., of Harokopio University, Athens, and his associates.

In a population-based sample of 3,042 "free-eating" adults who completed a food frequency questionnaire, all the inflammatory markers that were tested showed an inverse dose-response relation with fish consumption. Subjects who ate at least 300 g of fish per week had a 33% lower C-reactive protein level, a 33% lower interleukin-6 level, a 21% lower tumor necrosis factor–α level, and a 28% lower serum amyloid A level than those who did not eat fish. They also had a 4% lower white blood cell count, the investigators said (J. Am. Coll. Cardiol. 2005;46:120-4).

The researchers hypothesized that fish intake increases IL-6 synthesis, which in turn decreases the liver's production of CRP and serum amyloid A. The link to production of TNF-α is less clear, they said.

—Mary Ann Moon