Clinical Capsules

Early, Invasive ACS Therapy

The early, invasive treatment of acute coronary syndromes recommended by the American College of Cardiology, American Heart Association, and European Society of Cardiology was no better than a more conservative approach in a large, randomized clinical trial comparing the two strategies.

The trial was undertaken because it was unclear if early revascularization actually decreased mortality in high-risk ACS patients, compared with early, intensive medical therapy followed by revascularization only in selected patients. In the trial, 604 patients treated at 42 hospitals in the Netherlands were randomly assigned to undergo early angiography with percutaneous coronary intervention or coronary artery bypass graft surgery when appropriate, whereas 596 were assigned to medical management and proceeded to revascularization only if medical therapy failed.

Mortality at 1 year was identical in the two groups (2.5%), and freedom from angina was nearly identical. In contrast, the risk of MI was 5% higher in those who had early, invasive treatment, and most of the MIs were procedure related, reported Robbert J. de Winter, M.D., Ph.D., of the Academisch Medisch Centrum, Amsterdam, and his associates (N. Engl. J. Med. 2005;353:1095-104).

In an editorial comment, William E. Boden, M.D., of Hartford (Conn.) Hospital, said that most cardiologists have embraced the ACC-AHA recommendations and that there has been a decided shift toward early revascularization. The study results may well challenge the guidelines and prompt a reassessment of early intervention, he said (N. Engl. J. Med. 2005;353:1159-61).

Enlargement of Athlete's Heart

Left atrial enlargement is relatively common in highly trained athletes, but arrhythmias and other cardiac pathologies are "exceedingly rare," reported Antonio Pelliccia, M.D., of Italy's National Institute of Sports Medicine, Rome, and his associates.

In what they described as the first study to systematically examine the prevalence of left atrial remodeling and related arrhythmias in elite athletes, Dr. Pelliccia and his associates examined 1,777 athletes aged 11-56 years who excelled at 38 different sports. Most (80%) had normal left atrial size, but 347 (20%) had atrial enlargement, including 38 (2%) with marked dilation. Supraventricular tachyarrhythmias occurred in only one of these subjects (0.8%) over a median follow-up of 3 years (J. Am. Coll. Cardiol. 2005;46:690-6).

There is a common misconception that athletes are prone to arrhythmias that could trigger stroke or embolic events, and that the "athlete's heart" itself predisposes arrhythmia. These results show that this perception is incorrect. Instead, the cardiac remodeling seen in athletes is "a physiologic and benign adaptation to exercise conditioning," the authors said.

Aspirin Underused in Elderly With HF

Nearly half of the elderly patients hospitalized for heart failure and who have underlying coronary artery disease aren't given aspirin therapy after discharge, reported Frederick A. Masoudi, M.D., of the Denver Health Medical Center, and his associates.

In a study of 24,012 cases treated in all 50 states, 48% of eligible patients did not receive aspirin, and treatment rates varied dramatically among the states. Aspirin therapy correlated with lower mortality, lower rates of readmission, and fewer adverse events, even in patients with hypertension or renal dysfunction, and it did not attenuate the benefits of ACE inhibitors, they said (J. Am. Coll. Cardiol. 2005;46:955-62).

"Withholding this inexpensive treatment may deprive patients with [coronary artery disease] and concomitant heart failure of important clinical benefits," they noted.

Myoblast Transplant Found Safe

Transplantation of skeletal muscle cells into myocardium scarred by MI was found to be safe and technically feasible in a study of 30 patients followed for 2 years, according to Nabil Dib, M.D., of the Arizona Heart Institute, Phoenix, and associates.

Cardiac muscle doesn't have any significant capacity to regenerate after injury, but skeletal muscle does. Transplanted myoblasts have been shown to engraft into the myocardium and enhance cardiac function in animal studies. Dr. Dib and associates evaluated such transplantation in 24 patients undergoing elective coronary artery bypass graft and 6 undergoing implantation of a left ventricular assist device as a bridge to heart transplantation (Circulation 2005;112:1748-55).

Skeletal muscle samples were harvested from each patient, cultured, and injected into the epicardial surface of infarcted areas in one of four different doses. There were no complications and no evidence that myoblasts migrated into normal myocardium. Histology confirmed that myoblast engraftment and myofiber formation occurred, but further research is needed to assess whether the transplant procedure imparts any functional improvement, the researchers said.

—Mary Ann Moon