# Clinical Capsules

## ICD Beats Amiodarone in Heart Failure

In a direct comparison of the two therapies developed specifically to prevent sudden cardiac death in patients with heart failure, only the implantable cardioverter defibrillator (ICD) succeeded in doing so. Conservatively programmed, shock-only, single-lead ICD therapy cut mortality by 23%; amiodarone had no effect on survival, said Gust H. Bardy, M.D., of the Seattle Institute for Cardiac Research, and associates.

The benefits of both therapies have remained uncertain, so 2,521 patients with heart failure were enrolled in the Sudden Cardiac Death in Heart Failure Trial and followed for a median of 45 months. All received optimal conventional treatment. In addition, 845 were randomly assigned to receive amiodarone, 847 received placebo, and 829 received an ICD. The ICD was programmed to treat only rapid, sustained ventricular tachycardia or fibrillation.

Even though they found a 5% rate of acute device-related complications and a 9% rate of chronic complications, the survival benefit "outweighs any shortcomings of this approach," the researchers added (N. Engl. J. Med. 2005;352:225-37).

"We cannot emphasize too strongly that we evaluated only very conservatively programmed ICDs with a conservative detection algorithm and shock-only therapy … considerable caution should be used in extrapolating our results to other approaches to ICD therapy," they noted.

## Thrombolysis-Induced Ocular Bleeding

Hemorrhage is a well-known complication of thrombolytic therapy, but possible involvement of the retina is less well known, said Riyaz A. Kaba, M.D., and associates at Hillingdon Hospital, Uxbridge, England.

They reported the case of a 66-year-old man who received thrombolytic therapy when he presented with acute MI. Within a few hours, he had impaired vision in his left eye. Fundoscopic examination revealed subretinal hemorrhage, predominantly at the macular and posterior pole, and a large pool of blood between the retina and the vitreous base (Lancet 2005;365:330).

The vitreous hemorrhage brought on by thrombolysis persisted at 3-month follow-up, and vision in the patient's left eye remained impaired.

## Electrical Stimulation After Stroke

Early, intensive electrical stimulation of the leg muscles to mimic normal walking aided recovery of walking ability after stroke, said Tiebin Yan, M.D., of the Hong Kong Polytechnic University, and associates.

Of 41 patients aged 45-85 years who had an acute unilateral stroke within the carotid artery system, 13 were randomly assigned to receive functional electrical stimulation of the quadriceps, hamstring, tibialis anterior, and medial gastrocnemius muscles in a sequence that mimicked a normal gait. The 30-minute stimulation sessions were given 5 days a week for 3 weeks, starting within 3 days after transfer from an acute care facility. Another 13 patients who had no electrical muscle stimulation formed the control group, while 15 patients who had sham stimulation sessions formed the placebo group. All also received standard daily rehabilitative physiotherapy and occupational therapy, the researchers said (Stroke 2005;36:80-5).

Nearly 85% of the treatment group, compared with only 53% of the sham treatment group and 46% of the control group, recovered their walking ability and returned home to live independently. The treated patients also showed less muscle spasticity than those in the other groups.

## Deep Sternal Wound Infection Is Risky

The detrimental effects of deep sternal wound infection after coronary artery bypass grafting (CABG) extend well beyond the first 30 days, when patients typically appear to have fully recovered. This complication raises the risk of death threefold over the next 10 years at least, reported Ioannis K. Toumpoulis, M.D., of Columbia University, New York, and associates.

The long-term effects of deep sternal wound infection have not been well studied. To assess the impact of the infection on long-term survival, the researchers reviewed 3,760 consecutive cases of CABG performed at St. Luke's-Roosevelt Hospital Center from 1992 to 2002. Thirty-day mortality was the same in the 40 patients with deep sternal wound infection as in the unaffected patients.

But in patients who had developed the infection, overall mortality was markedly higher at 1 year (33.8%), 5 years (49.2%), and 10 years after CABG (59.4%) than it was in patients who had not developed deep sternal wound infection (6.4%, 16.8%, and 32.7%, respectively). The exact mechanism by which this complication continues to affect patient health for years after they have "recovered" remains unknown, the investigators noted (Chest 2005;127:464-71).

All patients who develop deep sternal wound infection should be followed carefully and monitored frequently thereafter, they added.

**—Mary Ann Moon**