Pre-Bypass Fish Oil Cut Post-Op Atrial Fibrillation

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NEW ORLEANS — Starting treatment with fish oil capsules several days before elective coronary artery bypass graft surgery resulted in a greater than 50% reduction in the incidence of postoperative atrial fibrillation in a 160-patient randomized trial, Leonardo Calo, M.D., said at the annual meeting of the Heart Rhythm Society.

In a second favorable Italian fish oil study presented at the meeting, Francesco Biscione, M.D., reported that treatment with omega-3 fatty acids reduced the burden of paroxysmal atrial arrhythmia by 67% in a group of pacemaker patients seriously affected by this rhythm disorder.

Dr. Calo explained that on the basis of clinical evidence suggesting omega-3 fatty acids have a suppressive effect upon ventricular arrhythmias, he and his coinvestigators at San Filippo Neri Hospital in Rome hypothesized that fish oil supplements might exert a similar beneficial effect with regard to atrial fibrillation (AF). They randomized 160 consecutive patients scheduled for coronary artery bypass graft (CABG) surgery to 2 g/day of omega-3 fatty acids starting at least 5 days preoperatively, or to a control arm.

Postoperative AF—a common and costly complication of cardiac surgery—developed in 33% of patients in the control arm and only 15% of patients on fish oil capsules. This translated into a 54% reduction in the incidence of the arrhythmia.

Since postoperative AF spells longer hospitalization, it was no surprise that the mean length of stay in the fish oil group was nearly a full day shorter—7.3 days, compared with 8.2 days in controls.

Perioperative β-blocker therapy has also been reported to reduce the risk of postoperative AF. Dr. Calo told this newspaper that although he had hypothesized that fish oil capsules and β-blockers might have an additive effect in this regard, this hypothesis wasn't borne out. The subset of patients in the fish oil group who were also on a β-blocker proved to have the same 15% incidence of postoperative AF as those on omega-3 fatty acids only.

In a separate study, Dr. Biscione reported on 40 patients who had experienced significant morbidity due to paroxysmal AF episodes since receiving a dual-chamber pacemaker more than a year earlier. They were placed on 1 g/day of omega-3 fatty acids for 4 months, after which the fish oil supplements were discontinued. Patients served as their own controls in this study, with investigators relying on the pacemakers' stored memory function to determine the impact of therapy.

In the 4 months prior to therapy, patients were in a state of paroxysmal atrial arrhythmia 3.9% of the total time. They experienced a mean of 444 episodes. While on fish oil, however, they had only 181 episodes and spent 1.0% of their time in a state of atrial arrhythmia. This is evidence of a powerful treatment effect, declared Dr. Biscione of San Giocomo Hospital, Rome. During the first 4 months after discontinuing omega-3 fatty acid therapy, the mean number of paroxysmal atrial arrhythmia episodes rebounded to 552. Patients spent 2.7% of that period in an atrial arrhythmic state. There were no significant adverse effects associated with fish oil therapy. ■

Lipid-Lowering Treatment May Protect Against AF

NEW ORLEANS — Lipid-lowering therapy appears to protect against the development of atrial fibrillation in patients with impaired left ventricular function, Ibrahim R. Hanna, M.D., reported at the annual meeting of the Heart Rhythm Society.

He presented data on 25,268 patients in the Guidant-sponsored Advancent SM, a national registry of patients with impaired left ventricular function. Their mean ejection fraction was 31%. Nearly three-quarters had ischemic cardiomyopathy.

Patients on lipid-lowering therapy—the vast majority of it consisting of statins—had a 34% reduction in the relative risk of having paroxysmal or persistent atrial fibrillation in a multivariate analysis controlling for potential confounders, according to Dr. Hanna of Emory University, Atlanta.

The prevalence of atrial fibrillation (AF) among patients on lipid-lowering therapy was 25%. This was a 23% lower rate than in patients not on lipid-lowering therapy, regardless of whether they were hyperlipidemic.

Overall, 79% of Advancent SM participants were on a β-blocker; 82% were on an ACE inhibitor or angiotensin receptor blocker. These drugs also appeared to protect against AF. However, lipid-lowering therapy had a protective effect independent of and additive to that of the other drugs.

The mechanism of lipid-lowering therapy's protective effect against AF is unclear. Some recent studies have implicated oxidative stress in the etiology of the arrhythmia. Statins are known to have antioxidant properties, Dr. Hanna noted.

Also at the meeting, Peter R. Kowey, M.D., said one of the hottest areas in drug development for suppression of AF involves therapies already being used in other contexts for patients who have heart disease.

The drug classes being looked at most extensively are the statins, because of their anti-inflammatory and other pleiotropic properties, and the ACE inhibitors/angiotensin receptor blockers. The research to date has predominantly involved retrospective looks at registry data or the landmark clinical trials that established the current indications for these drugs, said Dr. Kowey, professor of medicine at Jefferson Medical College, Philadelphia.

"At every national meeting this year there have been at least three or four abstracts in which people have delved back into assorted databases to try to understand in a retrospective fashion if there was a signal of these drugs preventing atrial fibrillation. I think it's fair to say that what we've seen so far indicates that in fact there is a signal," he said. "What we've seen so far as a treatment effect has certainly not been very robust. Unless we see some major increase in the amount of suppression of arrhythmias in these trials, it's unlikely that these drugs will be used as primary therapies, although they might be very useful accessory therapies in patients who are at risk." ■

Atrial Fib: New Wrinkle in Rate vs. Rhythm Control Debate

NEW ORLEANS — Maintenance of sinus rhythm in patients with persistent atrial fibrillation leads to significantly better quality-of-life and exercise performance scores—contrary to the findings of several prior highly publicized clinical trials, Steven N. Singh, M.D., said at the annual meeting of the Heart Rhythm Society.

"These observations may have a major impact on the controversy regarding the rhythm or rate control approach to management of patients with atrial fibrillation," added Dr. Singh of the Veterans Affairs Medical Center in Washington.

He presented a secondary quality-of-life analysis of the Sotalol Amiodarone Atrial Fibrillation Efficacy Trial (SAFE-T), a double-blind, randomized multicenter VA-sponsored study in which 665 patients with persistent atrial fibrillation (AF) were placed on amiodarone, sotalol, or placebo and followed for 1 year.

The primary SAFE-T results were recently published, showing that while amiodarone and sotalol were equally effective in converting AF to sinus rhythm, amiodarone was clearly superior at maintaining sinus rhythm (N. Engl. J. Med. 2005;352:1861-72).

Dr. Singh, SAFE-T co–principal investigator, presented a prespecified secondary quality-of-life outcomes analysis. Three prior major randomized controlled trials—the AF Follow-Up Investigation of Rhythm Management (AFFIRM), Pharmacological Intervention in AF (PIAF), and Rate Control Versus Electrical Cardioversion (RACE)—had concluded there is little quality-of-life difference between the rate and rhythm control strategies.

But the SAFE-T investigators were skeptical of this result. All three prior trials had used an intention-to-treat statistical analysis. The SAFE-T group believed it made more sense to analyze outcomes on the basis of whether patients were actually in sinus rhythm as determined using telemetry readings obtained weekly throughout follow-up.

In SAFE-T, quality-of-life and exercise performance were measured at baseline, 8 weeks, and 1 year. At both 8 weeks and 1 year, patients in sinus rhythm showed clear advantages over those in AF in terms of these outcomes. At 1 year, for example, the sinus rhythm group fared significantly better than patients in AF on four of the eight subscales of the Short Form-36 general quality-of-life scale. They also scored better in measures of specific symptom severity, exercise capacity, and heart rate. (See box.)

"In all fairness to the AFFIRM, RACE, and PIAF trials, which showed that there is no benefit for maintenance of sinus rhythm with respect to quality of life, I strongly believe that their analysis, which was done by intention-to-treat, is perhaps not the right way to do it, because 40% of the patients in the sinus-rhythm arm were actually in atrial fibrillation," Dr. Singh said.

David S. Cannom, M.D., noted that the SAFE-T findings are consistent with the general anecdotal experience that most patients tend to feel better in sinus rhythm than in AF.

The SAFE-T data "certainly strike me as closer to what we see in practice on a daily basis," added Dr. Cannom, director of cardiology at Good Samaritan Hospital, Los Angeles, and a past president of the Heart Rhythm Society. ■

Quality-of-Life Outcomes in SAFE-T Study

	Change From Baseline at 1 Year	
	Sustained Sinus Rhythm Group	Persistent AF Group
Treadmill Test Results		
Resting heart rate	–23.2 bpm	–4.9 bpm
Peak heart rate	–40.4 bpm	–12.3 bpm
Exercise duration	+77.9 sec	+14.6 sec
Short Form-36 Subscales		
General health	–0.1	–5.6
Physical functioning	+2.7	–1.9
Social functioning	+1.0	–5.3
Vitality score	+3.8	+0.3

Source: Dr. Singh

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