

Atrial Fibrillation and Heart Failure: Convergence of Two Epidemics

Pharmacologic Therapy

Atrial arrhythmias are common in patients with heart failure (HF), regardless of underlying etiology. Indeed, atrial fibrillation (AF) and HF coincide (AF/HF) in 10-15% of patients in class II-III HF, and each can exacerbate the other.

“Neither AF or HF can be properly managed independently of each other,” said Denis Roy, MD, Professor of Medicine, University of Montreal.

Dr. Roy cited a meta-analysis by Healey and colleagues (*JACC* 2005;45:1832-9) that surveyed 11 clinical trials and found that ACEIs and ARBs consistently reduced the risk of new or recurrent AF in HF by 28%, with similar benefits for both types of drugs.

“We must think of AF as a systemic disease,” Dr. Roy said. “Thinking in these terms will broaden decision-making, permit more comprehensive clinical strategies, and improve outcomes.”

AV Nodal Ablation and Pacing

Rahul N. Doshi, MD, Fullerton Cardiovascular Medical Group, reviewed results from the MUSTIC AF trial, which demonstrated promising results of Cardiac Resynchronization Therapy (CRT) in patients with AF. Dr. Doshi was the principal investigator for another study, Post AV Node Ablation Evaluation (PAVE), a multicenter trial which compared the effects of biventricular pacing with conventional RV pacing in patients with normal and decreased left ventricular function. This trial confirms the data of several small single center trials on benefits of CRT in patients with AF/HF.

In reviewing PAVE data, Dr. Doshi noted that in cases of chronic AF undergoing AV node ablation, “biventricular pacing should be considered the preferred mode of treatment in patients with systolic dysfunction.”

Atrial Fibrillation Ablation in HF

“AF and HF create a vicious circle,” said Li-Fern Hsu, MD, National Heart Centre, Singapore. “The two problems are intertwined, and we should consider them aspects of the same pathophysiology.”

Dr. Hsu presented his review of catheter ablation for AF in HF patients, published in the *New England Journal of Medicine* in December 2004.

“We looked at 58 patients with HF and a LVEF <45% who were undergoing catheter ablation for AF (pulmonary vein isolation). We selected 58 age- and sex-matched controls without HF who were also undergoing AF ablation,” Dr. Hsu said. “Our findings showed that restoration and maintenance of sinus rhythm by catheter ablation—without the use of drugs—in patients with AF/HF improved cardiac function, symptoms, exercise capacity, and quality of life.”

“Catheter ablation for AF is clearly feasible in HF, even with coexisting structural disease,” Dr. Hsu said. “And while more studies are needed, the evidence points to maintenance of sinus rhythm for improved outcomes.”

Atrial Pacing

After ablation, atrial pacing is the preferred procedure for patients with AF in whom rate control is critical—and for whom medications are either poorly tolerated or ineffective. Paul A. Friedman, MD, Mayo Clinic, presented several studies (Anderson et al, *Lancet* 1997; Tsang et al, *JACC* 2002; Carlson et al, *JACC* 2003), observing that device therapy (atrial pacing and defibrillation) that terminates AF will reduce hemodynamic burdens and improve outcomes. “But the current evidence does not support a recommendation for atrial defibrillation if a patient lacks an indication for an ICD,” Dr. Friedman said.