Heart Failure Update

Highlights from the American Heart Association Annual Meeting 2005

New Guidelines for Heart Failure

Five million people in the United States alone suffer with chronic heart failure (HF), producing in excess of 12 million office visits and 6 million hospital days every year. But advances are at hand that hold promise of ameliorating early disease and producing better outcomes in advanced disease. The new ACC/AHA Guidelines for the Diagnosis and Management of Chronic Heart Failure—the first revision in nearly five years—were released just weeks before the American Heart Association's 2005 Scientific Sessions convened. In replacing the older term "congestive heart failure" with simply "heart failure," the guidelines acknowledge the biological complexity that heart failure encompasses, much of which is not specifically "congestive" but rather dynamic, structural, and metabolic. Incorporating results of clinical trials as well as technological advances, the guidelines were discussed by ten physicians in two sessions. (See: http://www.acc.org/clinical/guidelines/failure/index.pdf)

2005 guidelines that depart from the earlier recommendations were discussed by two members of the ACC/AHA guidelines writing committee, Gary S. Francis, MD, Director, Coronary Care Unit, Cleveland Clinic, Cleveland, OH, and committee chair Sharon Ann Hunt, MD, Stanford University School of Medicine, Palo Alto, CA.

Beta blockers should be deployed in all stable HF patients with reduced LV ejection fraction, barring other contraindications. The guidelines recommend one of 3 agents that have been shown in randomized clinical trials to reduce the risk of death: bisoprolol (the CIBIS-II trial), carvedilol (the CAPRICORN trial), or sustained-release metoprolol (the MERIT-HF trial).

Implantable condioverter-defibrillators (ICDs) are recommended when LV ejection fractions are less than 31% (barring an end-stage scenario). Ejection fractions < 35% with wide QRS complexes should be considered for cardiac resynchronization therapy (CRT).

Spironalactone and other aldosterone antagonists are appropriate therapy, presuming normal (or relatively normal) renal function and potassium levels. (Dr. Hunt noted that recent studies suggest poorer outcomes associated with aldosterone antagonists in HF patients with demonstrable kidney disease.)

Isosorbide dinitrate and hydralazine should be combined in African American HF patients—or in any patient who cannot tolerate ACEIs.

Other presenters looked at the implications of HF disease staging.

Stage A and B HF was reviewed by Donna Mancini, MD, medical director, Cardiac Transplantation Program, NewYork-Presbyterian Hospital/Columbia University Medical Center, New York, NY, and a member of the ACC/AHA guidelines writing committee, and Mariell Jessup, MD, director of the heart failure and cardiac transplantation program at the University of Pennsylvania Medical Center in Philadelphia. Patients staged as A or B are not

yet in frank HF but are "showing the signs," Dr. Mancini said.

"These patients have hypertension, or diabetes—and maybe they're having trouble with lifestyle modification and they tend toward metabolic syndrome" added Dr. Jessup. (Although risk factors are evident in Stage A and B, LV function and dynamics may display either early changes or remain within normal limits.)

Stage C HF is the "most crowded stage in terms of population," said William Abraham, MD, Director, Division of Cardiovascular Medicine, The Ohio State University Medical Center, Columbus. "This is where most HF patients fall—either by way of being newly diagnosed, or with established HF but with early symptoms as opposed to acute decompensation." The use of the beta blockers bisoprolol, carvedilol, or sustained-release metoprolol "is the new thing with the revised guidelines," Dr. Abraham said. "What the trials showed us, and what the guideline writers emphasize, is that all beta blockers are not created equal. The 'big three' all have A-ranked levels of evidence."

Clinicians should go to ARBs in Stage C HF if a patient is ACEI-intolerant. "The aldosterone antagonists carry an evidence level of B," Dr. Abraham said.

CRT can be considered in Stage C patients, Dr. Abraham said, "but only if optimal medical therapy has been used." Dr. Abraham offered a four-part algorithm for stage C therapy: "First, control volume with diretics. Go with one of the 'big three' beta blockers. Add, as indicated, an ACEI, ARB, and/or an aldosterone antagonists. If deterioration continues with these therapies in place, consider going to CRT."

CRT was subsequently discussed by Maria Costanzo, MD, Medical Director, Midwest Heart Specialists/Edward Cardiovascular Institute, Naperville, IL. Studies have demonstrated CRT's capacity to improve exercise capacity and symptoms of patients in Stage C HF. The COMPANION trial (2003) confirmed that CRT "can reduce the need for hospital stays and improve survival," according to Dr. Costanzo.

The COMPANION trial looked at a group of 1,600 patients with "Stage C or D heart failure. These included people who had been hospitalized for HF or had documented conduction delays." Study participants were randomized to two arms: optimal drug therapy, or optimal drug therapy + CRT. (Dr. Costanzo noted that 50% of the CRT arm received CRT pacing only while 50% received ICDs.)

Results from the COMPANION trial demonstrated that patients receiving either CRT alone or ICD saw a 20% reduction in the composite endpoints (total hospitalizations and death from any cause.) Additionally, participants on the ICD arm had a 36% reduction in mortality alone.

The benefits demonstrated by COMPANION are "clearly impressive," said Dr. Costanzo.

Stage D HF "means we're talking about the 'big stuff'—transplantation and end-of-life issues," said Marc A. Silver, MD, adjunct professor of medicine at the University of Illinois at Chicago and a guidelines committee member. Dr. Silver urged clinicians to "not let these issues spring out of the blue in the last days of a patient's life. Start having conversations with patients and families when Stage D parameters are met. This is a clinical situation in which we must be patient, we must listen, and we must be family champions."