Congestion Did Not Predict HF Outcomes

BY BRUCE JANCIN

FROM THE ANNUAL CONGRESS OF THE EUROPEAN SOCIETY OF CARDIOLOGY

STOCKHOLM – The absence of signs and symptoms of congestion at discharge in patients hospitalized for acute decompensated heart failure does not predict a favorable prognosis, contrary to the conventional wisdom.

A new secondary analysis of the international EVEREST trial provides an important lesson in the everyday management of acute heart failure: "The fact that a patient improves in-hospital with diuretics and other medications is not sufficient. It's not 'mission accomplished,' " Dr. Mihai Gheorghiade said at the congress.

"In spite of having a very low congestion score, the event rate in EVEREST during 10 months of follow-up was astronomical," said Dr. Gheorghiade, professor of medicine and surgery and associate chief of cardiology at Northwestern University, Chicago.

BRUCE JANCIN/ELSEVIER GLOBAL MEDICAL NEWS

Dr. Gheorghiade: In-hospital improvement is not 'mission accomplished.'

EVEREST (Efficacy of Vasopressin Antagonism in Heart Failure Outcome Study With Tolvaptan) was a double-blind study that randomized 4,133 patients with worsening heart failure and a left ventricular ejection fraction of 40% or less to the oral vasopressin V2 receptor blocker tolvaptan or placebo within 48 hours of hospitalization.

Standard background therapy in both study arms included diuretics, ACE inhibitor or angiotensin II receptor blocker therapy, a beta-blocker, and an aldosterone antagonist. In the previously reported primary results, tolvaptan proved to have no benefit over placebo during a mean follow-up of 9.9 months (JAMA 2007;297:1319-31).

Dr. Gheorghiade presented a secondary analysis focusing on the 2,061 patients in the placebo arm. At randomization, following initial treatment with diuretics, these patients had a mean congestion score of 4 points based upon their degree of jugular vein distention, rales, and peripheral edema.

At discharge, patients had lost a mean 2.8 kg of body weight, and 72% had a congestion score of 0 or 1. Although that appears to be a high rate of short-term treatment success, this large subgroup of patients with minimal or no signs or symptoms of congestion at discharge had a 15% all-cause mortality and a 29% rate of rehospitalization for heart failure during the next 9.9 months.

The adverse event rate was even greater in those with a higher congestion score at discharge. In the overall placebo group, all-cause mortality was 26%, with a 40% rate of rehospitalization for heart failure during follow-up.

"We're dealing with a disorder that has an event rate as high as 50%. There is no other medical condition for which patients are hospitalized and are improving with therapy that has a comparable event rate," the cardiologist observed.

The new EVEREST analysis contains an important message for clinical trialists: Using the signs and symptoms of congestion as a key target for treatment during hospitalization as well as the standard end point in acute heart failure studies, as has been common until now, is a recipe for a negative trial result.

"It's very difficult to beat placebo, because placebo plus standard therapy has a tremendous effect on congestion," Dr. Gheorghiade said.

"Looking for new therapies that improve signs and symptoms of congestion in the whole population is a waste of time unless you're dealing with special populations who don't respond to standard therapies, such as patients with low blood pressure," he added.

Better surrogate markers than congestion are needed to guide therapy. One possibility is B-type natriuretic peptide (BNP). The mean BNP at admission in the placebo arm of EVEREST was 1,375 pg/mL. At discharge it was still markedly elevated at 948 pg/mL.

Until better treatments for acute heart failure are found, the best thing physicians can do for affected patients is try to identify specific targets amenable to current therapies, such as renal dysfunction or myocardial ischemia, Dr. Gheorghiade concluded.

The EVEREST trial was sponsored by Otsuka. Dr. Gheorghiade has received research grants and/or served as a consultant to Otsuka and numerous other pharmaceutical companies. ■

Self-Management Techniques Failed to Improve Heart Failure

BY MARY ANN MOON

FROM JAMA

VITALS

Major Finding: Patients with chronic heart failure who participated in a self-management intervention later showed no difference from a control group in the rate of death and HF hospitalization.

Data Source: A partially blinded, randomized, controlled trial involving 902 Chicago residents with mild to moderate HF who were followed for 2-3 years.

Disclosures: The HART study was funded by the National Institutes of Health. An associate of Dr. Powell reported receiving research funding from Novartis after the HART study was concluded.

An intervention to teach patients self-management of their chronic heart failure failed to reduce mortality or hospitalizations for the disorder, compared with patient education alone.

Nonadherence to heart failure medications is 30%-60%, and nonadherence to lifestyle recommendations is 50%-80% in the general population. Previous assessments of self-management techniques to improve adherence were limited by small samples and inadequate follow-up times, said Lynda H. Powell, Ph.D., of the department of preventive medicine at Rush University Medical Center, Chicago, and her associates.

The investigators designed HART (Heart Failure Adherence and Retention Trial) to have the size, duration, methodologic rigor, and representation of typical HF patients. They assessed mortality and HF hospitalizations after 1 year of self-management and another 1-2 years of follow-up in 902 patients with mild to moderate HF.

In all, 451 patients (average age, 64 years) were randomized to receive the intervention, and the other 451 served as controls.

Slightly fewer than half of the study subjects were women, and 40% were members of racial/ethnic minority groups. Overall, 23% had preserved systolic function, and the remainder had impaired systolic function, making the sample "representative of typical clinical populations."

At baseline, patients were taking an average of seven medications. Nearly 40% did not adhere to the prescribed dosage of either an ACE inhibitor or a beta-blocker. Median sodium intake was almost twice as high as is recommended for HF patients.

The intervention included 18 2-hour group meetings over the course of a year. Patients were educated about medication adherence, sudden weight gain, sodium restriction, moderate physical activity, and stress management, and were given American Heart Association tip sheets concerning HF. They also were counseled to help them develop mastery in problem-solving skills and in five self-management skills: self-monitoring, environmental restructuring, elicitation of support from family and friends, cognitive restructuring, and the relaxation response.

The control group received the AHA tip sheets by mail, and discussed the material by phone with study counselors.

The intervention did not improve the primary end point, which was hospitalization for HF events or death. There were 163 events in the intervention group (40%) and 171 in the control group (41%); the annual event rates were 18% and 19%, respectively. Both differences were nonsignificant.

Both study groups had a mean of 0.7 HF hospitalizations. At the study's conclusion, there were no differences between groups in 6-minute walk time, change in New York Heart Association class, heart rate, respiratory rate, blood pressure, or body mass index.

Nonadherence to prescribed ACE inhibitor or beta-blocker therapy had risen by 7% in both groups, the researchers said (JAMA 2010;304:1331-8). ■

VIEW ON THE NEWS

Telemonitoring Is the Wave of the Future

Unlike the self-management strategy used in this study, "new technologies to empower patients who have long-term medical conditions such as heart failure may motivate them to take a more active role in their own health care and may promote adherence to treatment," said Dr. John G.F. Cleland and Inger Ekman, Ph.D.

The self-management intervention in the current study, which included 18 2-hour meetings over a year's time, incurred considerable cost and inconvenience to patients. "Ultimately, electronic media, rather than in-person meetings with nurses and physicians, may become the predominant method of delivering health information, ensuring implementation of advice and treatment, and sending motivational messages efficiently and effectively," they said. Home telemonitoring also would allow patients to inform clinicians about symptoms, weight, heart rate, heart rhythm, and blood pressure on a daily or weekly basis.

The medical and nursing professions should be a catalyst to the "inevitable" changeover to telemonitoring, they said.

JOHN G.F. CLELAND, M.D., *is a cardiologist at the University of Hull (England).* INGER EKMAN, PH.D., R.N., *is at Göteborg (Sweden) University. Dr. Cleland reported receiving research funding from Phillips, a manufacturer of telemonitoring equipment. These comments are taken from their editorial accompanying Dr. Powell's report (JAMA 2010;304:1383-4).*