Challenging Conventional and Unconventional Wisdom

Cardiologists, epidemiologists, and molecular scientists at the 48th Scientific Sessions of the American College of Cardiology (ACC) in New Orleans, La., ventured into new territory, questioning the accepted treatments for various populations of patients and promising ones that have been widely heralded as the next generation in heart disease therapy.

Leading the challengers was David E. Wennberg, MD, of the Maine Medical Center in Portland. The ACC has charged Wennberg with the task of studying variations in rates of revascularization procedures performed throughout the nation; such variation is seen by many in the healthcare arena as a problem that must be resolved. The problem is that rates of surgery and procedures vary from state to state although the rates of disease are similar. By June 1999, Wennberg hopes to have published an atlas of his findings, the first step in determining the best method for handling this problem.

The Dartmouth Atlas of Cardiovascular and Thoracic Health Care, which will be published by the ACC, the American Hospital Association, and the Society of Thoracic Surgeons in July 1999, is one of many planned by a health-policy arm of Dartmouth Medical Center, Hanover, NH, as part of that group’s ongoing studies of variations in health care. The issue is an important one, said Anthony de Maria, MD, chief of cardiology at the University of California at San Diego Medical School. “When medical care has been studied from a geographic point of view,” he said, “differences have been found. This is an important issue for society and for the college (American College of Cardiology).”

In an effort to outline these differences, the college is helping sponsor Wennberg’s study defining the variations in cardiovascular services, including variations in provider and facility distribution as well as variations in the kinds and rate of procedures performed. “We want to analyze the data to find out why the variations exist,” said de Maria. “Is it disease patterns? Is it risk factors? Is it simply differences in practice? We feel we must do this.”

From the information, de Maria said, an atlas of the variations in cardiac disease and treatment will be published. Wennberg, an internist with a specialty in epidemiology and one of the younger life sciences faculty in the college’s workforce, is tasked with the task of studying variations in rates of need that take into account the aging population, said Wennberg. The study will also look at issues such as treatment of cardiovascular diseases, valvular disease, and conduction problems, as well as diagnosis. Other issues to be studied include regional use of aspirin and β-blockers in the treatment of myocardial infarction.

Geographic variations in workforce distribution are striking, said Wennberg. For example, the ratio of cardiologists to population varies from 3 per 100,000 to 9 per 100,000, depending on the area of the county. Cardiovascular surgeon ratios are 0.5 per 100,000 in some parts of the country compared with 2 per 100,000 in others.

The rates of imaging stress tests performed vary 4-fold from one region of the country to another, whereas rates of performance of coronary angiography show a 3-fold geographic variation, he said. Rates of angioplasty are highest in the South and Midwest. In some regions, β-blockers are used in the treatment of 80% of patients with myocardial infarction, whereas they are used for only 20% of patients in other areas.

“Our challenge is to improve the quality of care,” said Wennberg. “Patients get different care based on where they live. Access to and the process of care differ, depending on where the patients live. We are trying to take a proactive role in these issues. We hope it will mean improved care for people with cardiovascular disease.”

Challenging notions about the response of older patients to treatments was the reason that Todd Seto, MD, MPH, a cardiology fellow at Beth Israel-Deaconess Medical Center in Boston, Mass, undertook to evaluate the quality of life of >1300 patients who underwent angioplasty. David R. Holmes, Jr, MD, a coplanner of the ACC’s scientific sessions, said, “In the past, trials of treatment have excluded the elderly. However, that [the factor of being older] winds up being a significant issue.”

Seto agreed. “Some investigators feel older people are high-risk patients,” he said. He found that older people in the study had more complications than younger patients. “All patients improved,” he said. “Older patients improved less in terms of physical health.” However, when older patients were questioned about their quality of life after treatment, they were more likely to report significant improvements in activities such as the ability to climb stairs or carry groceries. After the intervention, they were less likely to say that their health caused them stress or limited daily activities, said Seto.

“Age is an independent risk factor for not getting care,” said Wennberg. “We treat older people differently than we do the younger.”

One important aspect of the study will be to look at the workforce in cardiology and marry those data to projections of need that take into account the aging population, said Wennberg. The study will also look at issues such as treatment of cardiovascular diseases, valvular disease, and conduction problems, as well as diagnosis. Other issues to be studied include regional use of aspirin and β-blockers in the treatment of myocardial infarction.

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“Just because someone is 75 doesn’t mean we should consider only that in discussion of care,” said Seto.

In another study of treatment of older patients, David Theimann, MD, of Johns Hopkins Hospital in Baltimore, Md, analyzed the treatment of 74,113 Medicare patients in a variety of hospitals across the country. According to his abstract, a more aggressive approach benefited older patients, even after adjustment for other risk factors. Even octogenarians benefited from treatment at hospitals that followed a more aggressive therapeutic pattern.

Ake Hjalmarson, MD, of Goteborg University in Sweden, made a plea for the use of β-blockers in treatment of patients with heart failure. “I want the drugs to be used based on good documentation and approval by authorities,” he said. Hjalmarson believes that his study, Metoprolol CR/XL Randomized Interventional Trial in Congestive Heart Failure (MERIT-HF), proved that one such β-blocker, metoprolol, was beneficial in reducing mortality. In a study of 4000 patients in 14 countries, researchers found that the overall death rate was reduced by 34% in patients who received the β-blocker. He reported a 41% reduction in sudden death and a 49% reduction in deaths due to heart failure. The study was stopped prematurely on October 31, 1998, because interim analysis of results revealed the striking reduction in mortality.

“β-Blockers unload the heart and let it recover,” Hjalmarson said. He advised starting treatment with a low dose of β-blockers. “When you start, you might cause problems,” he warned. “In the first week or 2 weeks, patients on β-blockers might feel worse or at least no better.” He said the treatment has the potential for benefiting 10 million patients in the United States. However, he warned, treatment should be limited to those β-blockers that have been involved in studies that have shown mortality reductions.

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