Atrial Fibrillation Research Spurs Updates to Treatment Guidelines

BY HEIDI SPLETE
FROM CIRCULATION

Higher resting heart rates and clopidogrel/aspirin options adopted.

Strict heart rate control has no benefit over more lenient control in patients with atrial fibrillation, experts stated in an update of treatment guidelines.

The previous guidelines advised keeping the heart rate of an atrial fibrillation patient at less than 80 beats/min at rest and less than 110 beats/min during a 6-minute walk. The updated guidelines advise keeping a resting heart rate of less than 110 beats/min in patients with persistent atrial fibrillation who also have stable ventricular function and have no symptoms, or symptoms deemed acceptable, related to their arrhythmia. The 2011 Focused Update on the Management of Patients With Atrial Fibrillation (Updating the 2006 Guideline) is a joint effort of the American College of Cardiology Foundation, the American Heart Association, and the Heart Rhythm Society. The guideline writing committee reviewed data from late-breaking clinical trials presented at scientific sessions of the AHA, ACC, and European Society of Cardiology in 2009, and other data published through April 2010 (Circulation 2010 Dec. 20 [doi:10.1161/CIR.0b013e3181fa3cf4]; Circulation 2011;123:104-23).

Another key update is the recommendation that a combination of clopidogrel and aspirin might be an option for atrial fibrillation patients who are poor candidates for warfarin. The recommendation is based on recent studies including the ACTIVE-A trial (Effect of Clopidogrel Added to Aspirin in Patients with Atrial Fibrillation). In this study, significantly fewer major vascular events occurred in patients randomized to receive clopidogrel plus aspirin, compared with those who received aspirin plus placebo.

“The clopidogrel/aspirin option is going to be of limited utility in most cases,” commented Dr. Anne B. Curtis, who was a member of the writing group, in an interview. The new thrombin inhibitors such as dabigatran will be used instead, she said. Because dabigatran was not approved by the Food and Drug Administration, related to their arrhythmia. The 2011 Focused Update on the Management of Patients With Atrial Fibrillation (Updating the 2006 Guideline) is a joint effort of the American College of Cardiology Foundation, the American Heart Association, and the Heart Rhythm Society. The guideline writing committee reviewed data from late-breaking clinical trials presented at scientific sessions of the AHA, ACC, and European Society of Cardiology in 2009, and other data published through April 2010 (Circulation 2010 Dec. 20 [doi:10.1161/CIR.0b013e3181fa3cf4]; Circulation 2011;123:104-23).

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High Cardiac Troponin T Doubled Event Risk

BY MITCHEL L. ZOLER

FROM THE ANNUAL SCIENTIFIC SESSIONS OF THE AMERICAN HEART ASSOCIATION

CHICAGO – Higher serum levels of cardiac troponin T independently predicted an increased rate of new-onset heart failure and cardiovascular death in a longitudinal study of more than 4,000 elderly, community-dwelling Americans.

“Measurement of cTnT [cardiac troponin T] may be useful in cardiovascular risk stratification in older adults,” Dr. Christopher R. deFilippi explained at the meeting.

Assessing cTnT’s role as a risk predictor became possible with the recent availability of high-sensitivity assays. Previous studies using conventional cTnT assays found roughly 4% of the general elderly population had detectable levels; in Dr. deFilippi’s new study, 6% of community-dwelling U.S. adults with a median age of 71 had detectable cTnT levels.

The high-sensitivity test produces “about a 10-fold increase in the number of people with detectable cTnT,” that’s what gives us a dynamic range,” said Dr. deFilippi, a cardiologist at the University of Maryland in Baltimore.

Results from two other studies presented at the meeting and a third study published in early December showed similar links between high levels of cTnT and cardiovascular or cardiac death, or both.

The consistent findings from all these studies show that cTnT “is a pretty good risk predictor. Cardiac troponin offers a very easy way for a physician to say that a person is at high risk for new-onset heart failure, cardiovascular death, or other cardiovascular disease events,” Dr. deFilippi said in an interview.

“I look at [cTnT] as early biochemical evidence of pathology. Finding a high level in a person could be a wake-up call. It gives some of the earliest, direct evidence with a cardiac-specific molecule that pathology is taking place,” independent of traditional risk factors, including systolic blood pressure, smoking status, serum creatinine, and left ventricular size, people with baseline cTnT levels above the median all had a significantly increased risk for both new-onset heart failure and cardiovascular death. The quintile of people with the highest cTnT level had a 2.5-fold increased risk of new-onset heart failure and a threefold increased risk of cardiovascular death compared with those who had an undetectable level at baseline.

Even when the investigators adjusted the analyses for baseline levels of NT-pro brain natriuretic peptide and C-reactive protein, people in the highest quintile for baseline levels had a two-fold higher rate of heart failure and cardiovascular death during follow-up.

Records on follow-up cTnT levels, measured 2-3 years after baseline in 86% of the study participants, showed that among those with a detectable cTnT level at baseline, nearly two-thirds stayed at about the same level, 22% increased by more than 50%, and 14% decreased by more than 50%.

The high increasers had their subsequent heart failure and cardiovascular death rates rise by about 50% compared with people with more moderate changes. In contrast, among those whose levels fell by more than 50% during follow-up subsequent event rates dropped by about 25% compared with those with less change in their cTnT level. Concurrent with Dr. deFilippi’s talk at the meeting, the findings also appeared in an article published on-line (JAMA 2010; 304:doi:10.1001/jama.2010.1708).

The results of the study also identified a number of people with very high levels at baseline that then fell to an undetectable level at their second cTnT measurement. Few people showed this kind of change, but it occurred often enough for Dr. deFilippi to speculate that certain actions can effectively lower serum cTnT levels.

“The source of the cTnT isn’t clear. Dr. deFilippi said that he believes it’s caused by a chronic process, although the specifics remain unknown. “It’s unlikely an ischemic cause,” he said. “The issue is, once you see a high level, can you intervene? Right now, that’s an open question.”

Catheter Ablation Supported

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ministration when the committee was making its decisions, it was not included in the guidelines, according to the report. The updated guidelines also suggest the use of dronedarone for some atrial fibrillation patients to reduce hospitalizations for cardiovascular events.

Recent studies such as the DIONYSOS study (Efficacy and Safety of Dronedarone Versus Amiodarone for the Maintenance of Sinus Rhythm in Patients With Persistent Atrial Fibrillation) showed that dronedarone was less effective than amiodarone for reducing the recurrence of atrial fibrillation. However, in a placebo-controlled, double-blind, parallel-arm trial to assess the efficacy of dronedarone 400 mg b.i.d. for the prevention of cardiovascular hospitalization or death from any cause in patients with atrial fibrillation/atrial flutter (the ATHENA trial), dronedarone reduced the “the combined end point of death and cardiovascular hospitalizations, largely by reducing hospitalizations related to atrial fibrillation,” the reviewers wrote. However, dronedarone should not be given to patients with NYHA class IV heart failure or patients with decompensated heart failure with in the past 4 weeks, they noted.

To maintain normal sinus rhythm, the updated guidelines support the use of catheter ablation based on data from more than 6,900 patients. In one multicenter study (the Thermocoool study), symptomatic patients with paroxysmal atrial fibrillation who were treated with catheter ablation showed significant improvement after 3 months, compared with control patients. Currently, catheter ablation treatment is recommended for atrial fibrillation patients without severe lung disease who have not had success with drug therapy.

Dr. L. Samuel Wann, a cardiologist at Weathon Franciscan Healthcare in Wauwatosa, Wis., served as chair of the 2011 Writing Group Committee. Dr. Wann and his colleagues wrote that the 2006 full-text guidelines for the management of atrial fibrillation that are the source of the 2011 update remain unchanged at this time. “The guidelines attempt to define practices that meet the needs of most patients in most circumstances,” the reviewers said. The last time the guidelines were published was in 2006, and there have been several new drugs and treatments that have been developed since that time.

Physicians want to know where they stand in terms of the hierarchy of treatment of patients with atrial fibrillation,” explained Dr. Curtis, chair of the department of medicine at the University of Buffalo, N.Y. “In order to be timely, we did a limited, focused update,” she said. The clinical implications of more lenient heart rate control are unclear at this time, Dr. Curtis said. In the Rate Control Efficacy in Permanent Atrial Fibrillation (RACE II) study, which the recommendations were based, the difference in heart rate control between lenient control and strict control groups was limited, she noted.

But the study emphasized the need for clinicians to be careful about going too far in trying to control patients’ heart rates, Dr. Curtis said, because too much control could lead to bradycardia and unnecessary pacemaker use.

As for additional research, “We need to know how to prevent (atrial fibrillation) in the first place, and we need to understand thoroughly the long-term outcomes of ablation therapy,” Dr. Curtis said. Dr. Wann had no financial conflicts to disclose. Several of the writing group members, including Dr. Curtis, disclosed some relationship to the pharmaceutical companies including Medtronic, Boston Scientific, AstraZeneca, Sanofi-Aventis, and GlaxoSmithKline.