

# β-Blockers Not First Choice in Primary HT

BY ROBERT FINN  
San Francisco Bureau

Compared with placebo, β-blockers decrease the risk of stroke by only 19% when used to treat primary hypertension—about half the decrease in risk determined by some previous studies that proved highly influential in the creation of treatment guidelines, according to a metaanalysis of randomized trials involving 105,951 patients.

The metaanalysis also showed that the risk of stroke is 16% higher with β-blocker treatment than with other medications, and that β-blockers offer no advantage in preventing myocardial infarction, reported Dr. Lars Hjalmar Lindholm of Umeå (Sweden) University Hospital, and colleagues (Lancet 2005;366:1545-53).

Considering that other antihypertensives, such as thiazide diuretics and ACE inhibitors, are as effective in reducing blood pressure as are β-blockers, are as inexpensive, and provide greater decreases in the risk of stroke, the authors concluded that β-blockers should not remain the first choice in the treatment of primary hypertension.

In an editorial, Dr. D. Gareth Beevers of City Hospital, Birmingham, England, suggested that many guidelines committees will have to rethink their endorsement of β-blockers for the first-line treatment of primary hypertension. He also said that the National Heart, Lung, and Blood In-

stitute will have to rethink proposals to use β-blockers in long-term outcome studies of the treatment of systolic hypertension (Lancet 2005;366:1510-2).

But Dr. Beevers cautioned that widespread dissemination of this new meta-analysis in the popular media may encourage patients to discontinue β-blockers abruptly. Sudden discontinuation can result in rebound angina and can precipitate myocardial infarction.

Furthermore, some patients, such as those who have an anxiety disorder in addition to hypertension, may experience some symptomatic relief from β-blockers in addition to the antihypertensive effects.

**Physicians are warned against the sudden discontinuation of β-blockers, which can result in rebound angina and precipitate myocardial infarction.**

If a physician decides to discontinue a patient's β-blocker, the best strategy would be to do this by down-titration while substituting alternative antihypertensive drugs.

The authors of the meta-analysis speculated on the reasons that β-blockers are less effective than other classes of drugs in reducing the risk of strokes in spite of the fact that they are just as effective in reducing blood pressure.

They noted that although β-blocker treatment reduces brachial blood pressure, it does not reduce central systolic blood pressure as much as ACE inhibitors, diuretics, and calcium antagonists. Regression of left ventricular hypertrophy is more closely associated with patients' central blood pressure than with their brachial blood pressure, the authors asserted. ■

# ICD Patients Typically Recover Quality of Life

BY MITCHEL L. ZOLER  
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STOCKHOLM — Patients who get implanted cardioverter defibrillators may feel depressed and anxious at first, but with time usually feel better emotionally, according to results from a study of 70 patients who were followed for 4 years after implantation.

"You can tell patients that they may first feel distressed, but over time they will eventually adjust to having a device in place," Diane L. Carroll, R.N., Ph.D., reported at a poster presentation at the annual congress of the European Society of Cardiology.

"This is the first study to look at patients with ICDs [implanted cardioverter defibrillators] for more than 2 years." These are also the first data to show that patients have a psychological adjustment to living with an ICD.

Among the 70 ICD patients who were followed, 80% received the device because they had coronary artery disease and 20% because they had a genetic disease. Their average New York Heart Association class was 2.5, and their average left ventricular ejection fraction was 36%. During the 4 years of follow-up, 10 patients died, and another 19 were lost to follow-up or withdrew from the study.

During the 4 years after getting an ICD, the patients' mean mental health

composite summary scores improved significantly, compared with baseline, even though their physical health composite summary scores continued to decline.

The improvements in mental health scores included reductions in levels of anger, confusion, fatigue, depression, and anxiety, said Dr. Carroll, a clinical nurse-specialist in Patient Care Services at Massachusetts General Hospital in Boston. Patients also had increased vigor scores with time.

Overall patients' physical health scores declined during follow-up. That was not an unexpected finding because a majority of the patients had coronary artery disease. The findings highlighted the opportunity to quickly engage these patients in a cardiac rehabilitation program when they receive their ICD, Dr. Carroll told this newspaper.

New studies should assess the effect of strength training and activity progression on ICD patients in a supervised environment, she added.

Although 19 of the original 70 patients were alive but declined to participate with follow-up, Dr. Carroll was doubtful that they dropped out because of psychological distress. All 19 were contacted; in general, they didn't participate in the follow-up because they felt good and didn't think that they had the time, she said. ■



**Patients may feel distressed at first, but over time they will adjust to having a device in place.**

DR. CARROLL

## CLINICAL CAPSULES

### Periodic Breathing Common in CHF

Periodic breathing during sleep and during exercise appear to be very common in patients with stable heart failure, affecting about half of them, reported Dr. Ugo Corrà of the Salvatore Maugeri Foundation, Veruno, Italy, and associates.

Periodic breathing is an abnormal oscillatory ventilation pattern consisting of cyclic hyperpnea and hypopnea, which can occur in heart failure (HF) patients during sleep or on exertion. Often, the coexistence of the two types of periodic breathing in one patient is hidden from the physician because one type is detected only on exercise testing and the other only in sleep studies.

Dr. Corrà and associates assessed the prognostic value of sleep periodic breathing and exertional periodic breathing in a prospective study of 133 patients with stable, moderate to severe HF as a result of ischemic or idiopathic dilated cardiomyopathy (Circulation 2006;113:44-50).

A total of 67 patients (50%) had some form of periodic breathing: 39 patients (29%) had severe sleep periodic breathing alone, 6 (4%) had exertional periodic

breathing alone, and 22 (16%) had both.

During a mean of 3 years of follow-up, 30 patients (23%) died of cardiac causes. Mortality was 9% in patients with no periodic breathing disorders, 17% in those with exertional periodic breathing alone, 31% in those with sleep periodic breathing alone, and 54% in those with both breathing disorders.

Thus, the combination of both sleep and exertional periodic breathing is "a peculiarly ominous condition," the investigators said.

### CRP Doesn't Predict Plaque Burden

C-reactive protein levels appear to be a poor predictor of atherosclerotic plaque burden, reported Dr. Amit Khera of the University of Texas Southwestern Medical Center, Dallas, and associates.

The researchers measured CRP levels in an ethnically diverse, population-based probability sample of subjects aged 30-64 years who were enrolled in a large clinical trial on heart disease. They then assessed correlations between CRP and coronary artery calcification as measured by electron-beam CT in 2,726 of the subjects.

In addition, because not all atherosclerotic plaque is calcified, the investigators examined possible correlations between CRP levels and a novel measure of "soft" plaque—MRI assessment of detectable levels of aortic plaque—in 2,393 subjects. CRP levels were only modestly associated with atherosclerotic burden, and the correlation was stronger in men than it was in women.

However, this correlation disappeared after the researchers adjusted data for subject age, body mass index, and standard cardiovascular risk factors such as smoking and diabetes (Circulation 2006;113:38-43).

The study results suggest that the link between high CRP levels and incident cardiovascular events "may reflect the composition, morphology, and stability of plaque rather than overall atherosclerotic burden," they added.

### Sizing Up Impact of VTE

More than 900,000 people in the United States experience venous thromboembolism events each year, and a third of these events are fatal, Dr. John A. Heit of the Mayo Clinic, Rochester, Minn., and his colleagues reported in a poster at the an-

nual meeting of the American Society of Hematology.

Using community, hospital, and U.S. census data, the investigators developed an incidence-based model, which estimated that the total annual number of nonfatal venous thromboembolism (VTE) events in the United States is 613,423, including 376,365 cases of deep vein thrombosis (DVT) and 237,058 cases of pulmonary embolism (PE). The estimated annual number of fatal VTE events is 296,370, including 2,258 cases of DVT and 294,112 cases of PE.

Only 7% of VTE-related deaths occur in patients who are diagnosed and treated. More than a third (34%) are a result of sudden, fatal PE, and 59% follow undiagnosed VTE. Two-thirds of VTE events occur in hospitals where safe and effective prophylaxis is available, Dr. Heit noted.

Effective VTE prophylaxis and expert consensus guidelines on the use of prophylaxis are widely available; universal prophylaxis could significantly reduce VTE incidence and related deaths in this country, and its impact deserves further study, the investigators concluded.

—Mary Ann Moon and Sharon Worcester