European, U.S. Experts Revisit Prehypertension

A first-ever joint meeting of ESH and ASH appears to have generated consensus on treating early disease.

BY ERIK GOLDMAN
Contributing Writer

MADRID — European and American hypertension specialists appear to be mending their rift over the issue of "prehypertension," and moving toward consensus on the importance of treating the earliest stages of the hypertensive disease process.

Leaders of the European Society of Hypertension (ESH) and the American Society of Hypertension (ASH) held a first-ever joint meeting during the European society's 16th Annual European Meeting on Hypertension. Despite past differences regarding prehypertension, views on both sides of the Atlantic now show far more convergence than divergence.

The concept of prehypertension, and the position that some high-risk people with blood pressures as low as 120/80 mm Hg should be treated with antihypertensive drugs, drew considerable criticism, especially from European cardiologists, when it was first articulated in the 2003 Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) guidelines. Critics on both sides of the ocean argued that JNC was doing the bidding of pharmaceutical companies by lowering the treatment threshold in a way that would suddenly render as many as 50 million more people eligible for drug therapy.

Dr. Thomas D. Giles, immediate past president of ASH, who represented the Americans in the joint meeting, defended the underlying intention of the recommendations. "JNC was calling attention to the fact that just because the blood pressure isn't over 140/90 doesn't mean there's no disease process going on." Essentially, JNC took the 120/80 cut-point, considered "optimal" in the previous guidelines, and made it the new "normal," with the new "optimal" being under the 120/80 mark.

Over the last 3 years, a number of studies and metaanalyses have shed light on the subject, dispelling much of the criticism but also tempering the enthusiasm of those who would treat anyone with systolic pressure over 120 mm Hg.

The Trial of Preventing Hypertension (TROPHY) showed that treatment of high-risk but normotensive patients could keep them from going into the hypertension range (Am. J. Hypertens. 2005;18:980-5). Dr. Giles pointed out that although these patients were considered normotensive under current guidelines, many of them had multiple risk factors for cardiovascular disease.

"These were not normal people. They were actually sick, and the study showed that if you give them an ARB [angiotensin receptor blocker] and get a 10-mm reduction in systolic [blood pressure], you can prevent emergence of frank hypertension. I would not want to be in the placebo group of the TROPHY study," he said.

In aggregate, available data support the notion that the hypertensive and cardiovascular disease process begins well before blood pressure increases, and that early intervention can reduce cardiovascular risk. However, the emerging view obliterates the idea of simple blood pressure cut-points and supports the European view that blood pressure itself is only one of many variables that must be considered in a global clinical assessment of a person's cardiovascular risk.

The very same data set that gave rise to the original prehypertension concept also challenges the idea of simple clinical cut-points. JNC developed the prehypertension idea after looking at the data of Lewington and colleagues (Lancet 2002;360:1903-13), which showed that cardiovascular risk begins to rise at pressures as low as 115/75. For each 20/10 mm Hg rise in pressure, there is a doubling of cardiovascular risk. But these same data obliterate simple thresholds. "There really is no cut-point, no threshold. There's only a continuum of risk that begins after 115/75."

The point, said Dr. Giles, is that "you cannot treat blood pressure isolated from the rest of the patient. … New definitions of hypertension should not be based on rigid numeric cut-offs, but rather on assessment of the overall state of the cardiovascular system."

If Dr. Giles' comments seem to have a decidedly European accent, Dr. Giuseppe Mancia, executive officer of the Scientific Council for ESH, said European views are starting to move to an American beat. "There are a lot of high-risk people who have early signs of organ damage, and they need treatment regardless of the blood pressure numbers," he said.

Dr. Peter Sleight, of the department of cardiovascular medicine at John Radcliffe Hospital, Oxford, England, said that one of the main virtues of JNC's prehypertension idea is that it called attention to the fact that the majority of strokes occur in people who would have been considered normotensive under previous guidelines. "The whole game in stroke prevention is in lowering blood pressure. A systolic of 135 carries lower risk than a systolic of 145," said Dr. Sleight.

ESH is in the process of revising its therapeutic guidelines, which were last revised in 2003, and the new edition is expected sometime next year. Although it is too soon to know exactly what they will say, Dr. Mancia predicted they will likely move European practice standards closer to the early-intervention predilection of the Americans.

The new European guidelines will definitely underscore the general importance of lowering blood pressure. "We know that regardless of the kind of treatment you give, lowering blood pressure is protective. The magnitude of pressure reduction correlates directly with the magnitude of reduction of cardiovascular morbidity and mortality. We don't care how you do it. Get the pressure below 140/90, and you reduce risk. It should be below 130/80 if patients are at high risk. All the international guidelines agree on this."

They will also likely support the wider use of combination therapy at the outset of treatment. The Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT) showed that 9 of 10 high-risk hypertensive patients required more than one antihypertensive medication to achieve pressure control.

The guidelines will reinforce the general European preference for global risk assessment. "We need to look at the overall status of the cardiovascular system, not just the blood pressure measurements. The greater the risk, the more aggressive the treatment should be," said Dr. Mancia, professor of medicine at the University of Milan-Bicocca, Italy. He stressed that total risk assessment involves consideration of subclinical organ damage such as microalbuminuria and left ventricular hypertrophy.

If patients have LVH alone or microalbuminuria alone, they do far better than if they have both (J. Hum. Hypertens. 2004;18:453-9). Early organ system damage "is prognostic, and it won't show up unless you look for it. Regression of LVH or proteinuria by treatment is associated with improved outcomes. We surmised this, but we didn't have the data in 2003," he said.

Dr. Mancia and Dr. Giles agreed that it is these other factors that will be critical in determining if a patient with borderline high blood pressure truly needs treatment. If an otherwise healthy 65-year-old man has a pressure reading of 125/80, he probably does not need drug therapy. However, if there are elevated lipids, impaired glucose tolerance, microalbuminuria, and other indicators of risk, the rationale for treatment is much stronger.

'If you measure blood pressure in the brachial artery,' you may be missing the picture of central aortic pressures.

DR. GILES

It is important to look at blood pressure over time. A systolic measurement of 120 may seem normotensive, but if this reflects a steady and consistent increase from 90 or 100 in previous years, it is an indicator that the cardiovascular system is beginning to malfunction.

The new ESH guidelines will probably call for wider use of ambulatory and home blood pressure monitoring. Dr. Mancia stressed that office pressure measurements are limited, and cited a recent Italian study that showed progressive increase in risk if ambulatory or home pressure measurements are also increased.

Hypertension experts across the globe are beginning to question the value of brachial artery pressure measurements. "If you measure blood pressure in the brachial artery, you cannot be confident you're getting a picture of the central aortic pressures," said Dr. Giles. He added that measurement of central aortic pressure makes a lot more sense. Currently, the technology to do so is limited to research settings, but this is a technological impediment not a conceptual one. ■

ADA, AHA Issue a 'Call to Action' on Cardiovascular Risk Factor Screening

Physicians are strongly advised to assess patients for their global risk of cardiovascular disease and diabetes, according to a "call to action" from the American Heart Association and the American Diabetes Association.

"The overweight or obese patient deserves major clinical attention. The growing prevalence of this condition threatens to undermine all of our recent gains to prevent and control chronic disease," the authors wrote (Circulation 2006;113:2943-6, Diabetes Care DOI: 10.2337/dc06-9911).

Cowritten by the presidents and chief science advisors of the two organizations, the document was issued in part to dispel the notion that there is disagreement between the ADA and AHA about the need to assess patients for risk factors such as prediabetes, hypertension, dyslipidemia, obesity, and smoking. In fact, the debate has been specifically about the clinical utility of the term "metabolic syndrome," not about the overall need to screen patients for risk of cardiovascular disease (CVD), they said.

"Unfortunately, some of the medical press have positioned the scientific issues related to the metabolic syndrome as a 'battle' between the [ADA and AHA], implicitly suggesting that CVD risk factor identification and treatment is now questionable. We are concerned that the presumed dispute will lead to a reduction in the favorable trend of many aspects of CVD risk factor reduction," said AHA president Dr. Robert H. Eckel and ADA president Dr. Robert Rizza, along with science advisors Richard Kahn, Ph.D., of the ADA and Dr. Rose Marie Robertson of the AHA.

Another reason for issuing the statement, they noted, is the recent evidence suggesting that risk assessment and adherence to national guidelines remains "woefully suboptimal."

The ADA has an online tool, at www.diabetes.org/diabetesphd, that incorporates all known CVD risk factors and can be used to predict the effects of treatment. Readers are also referred to a statement about strategies for preventing CVD, cancer, and diabetes issued jointly by the ADA, AHA, and the American Cancer Society (Diabetes Care 2004;27:1812-24, Circulation 2004;109:3244-55).

—Miriam E. Tucker