Some surprises in update to European hypertension guidelines?
JUNE 15, 2009  Lisa Nainggolan

**Milan, Italy** - The European Society of Hypertension (ESH) is set to stir up the field of BP guidelines later this year, when it publishes an update to its 2007 recommendations. During a special session at the European Meeting on Hypertension 2009 here yesterday, Dr Giuseppe Mancia (University of Milan Bicocca, Monza, Italy), outlined the main changes and said the complete new guidelines will be published in the October 2009 issue of the *Journal of Hypertension*.

Key among the changes will be the recommendation of a lower threshold level—around 120 mm Hg systolic and 70 mm Hg diastolic—below which it could be dangerous to reduce blood pressure in high-risk individuals, representing the so-called J-curve phenomenon, Mancia said. And rather than emphasizing which antihypertensives should be used first-line, second-line, etc, the new guidelines will instead advise tailoring therapy to individual patient circumstances, he explained.

Also new will be the first European guidelines on the management of high blood pressure in children and adolescents, which will be published in the September 2009 issue of the *Journal of Hypertension*. Dr Empar Lurbe (University of Valencia, Spain) told meeting attendees. Of key importance among these recommendations will be the indications for future research, she said. "Currently, in Europe, we don't have reference data on adolescents and children, we have to rely on data from the US," so it's imperative that baseline values based on the European pediatric population are established. Other important future endeavors include the development of accurate nonmercury sphygmomanometers for pediatric use and drug trials in this "therapeutic orphan" patient population, she said.

Doctors are also eagerly awaiting new American guidelines on hypertension—the eighth edition of the *Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC 8) is expected later this year—but many are unsure exactly what to expect.

**J-curve: A narrow window of optimum BP for high-risk individuals**

Mancia told the meeting that the decision to update the 2007 European hypertension guidelines was taken "because, since then, there have been a number of trials published that could change the recommendations, or in other instances, new data have reinforced the recommendations made."

There are also other situations where "difficult and controversial conclusions" have created confusion, he explained, adding that although the new guidelines document "is still under refinement, the committee agrees on the principles and the issues, which is why I can present it today."

In terms of hypertension treatment thresholds and goals, these will remain pretty much the same as in 2007, he said, with a treatment threshold of 140/90 mm Hg or greater for general hypertension, and a therapy goal of <140/90 mm Hg for this population. For high-risk individuals, the treatment threshold is 130/85 or greater and the treatment goal should be <130/80 mm Hg, although he acknowledged that "the more aggressive goal in high-risk individuals is not supported by outcomes trials, so further hard evidence is needed."

But with the decision to include a lower threshold below which BP should not be lowered in high-risk individuals, this means the window of optimum BP will be narrow in high-risk individuals.

Explaining the new decision, Mancia said: "In 2007, apart from [HOT], all the trials were retrospective, but we knew there must be a BP below which perfusion of vital organs is compromised. Now, a number of studies—including [INVEST, ONTARGET, VALUE] and [TNT]—have been remarkably consistent" in showing that there is indeed a floor for high-risk individuals below which BP should not be lowered "in order to avoid harm," he noted. "If BP approaches 120/70 in high-risk individuals, a J-curve appears, and this should generate concern," he said.

**Treat the elderly; tailor treatment to specific patients**

Another important change since 2007 will be the recommendation for the very elderly, those aged...
over 80, in whom the benefits of lowering blood pressure had previously been "inconclusive," Mancia explained.

"Now things have changed with the HYVET data, which showed major benefit, suggesting that we prolong the life of these very old people if we control their BP when BP is elevated," although the trial does have some limitations, he commented.

In terms of choice of drug therapy for hypertension, in 2007 there were five drug classes listed as suitable for initiation of therapy—diuretics, ACE inhibitors, calcium-channel blockers (CCBs), angiotensin receptor blockers (ARBs), and beta blockers.

"Since then, a number of important trials have added new evidence in favor of the protective effects of ACE inhibitors, ARBs, and CCBs and have reinforced the position of these drugs as options to treat hypertension and other conditions such as heart failure and renal disease."

One of the controversies with regard to drug choice has been the debate about the use of beta blockers, he said, with the UK NICE and the British Society of Hypertension removing them from first-, second-, and even third-line choice of treatment in 2006.

"In 2007, the [ESH] committee felt this was not an appropriate decision, as beta blockers were usually employed together with diuretics in virtually all trials, so it was difficult to discriminate what was the favorable or unfavorable role of one drug class or another," he noted. And although there have been negative trials with beta blockers—LIFE and ASCOT—there have also been positive ones, such as HAPPY, IPPSH, STOP, INVEST, and UKPDS, he noted.

The totality of evidence now shows different conclusions for different patient populations, he said. "For example, for stroke prevention, beta blockers are inferior to calcium antagonists, but for congestive heart failure prevention, beta blockers are superior to calcium antagonists and similar to other drugs," he noted.

In fact, reducing the emphasis on the step-by-step approach to treatment in general—not recommending particular antihypertensives as first-line, second-line therapy—is another central tenet of the new guidelines, Mancia noted.

"Classifying agents as first choice, second choice, third choice, etc, betrays reference to an average patient who hardly exists in clinical practice," he said, adding: "It is much better to indicate which drug might be preferred in which patient under which circumstance. All drugs have advantages and disadvantages, and we have to try to see in which conditions the advantages of a drug come out."

But combination therapy remains choice for high-risk individuals

But the new guidance will again stress the importance of using combination therapy first-line in high-risk individuals, as advised in 2007, he said, although new data in the intervening two years are helping to refine these recommendations, he noted.

"In 2007, we took a strong stance in favor of combination treatment. This has been shown again—trials such as ACCOMPLISH, ADVANCE, HYVET, ASCOT and ONTARGET are changing the picture. We have to lower BP rather quickly [in these patients] to try to prevent a catastrophe," and more recently, studies have shown there is less discontinuation of treatment in this patient population if treatment is started with combination therapy, Mancia said.

"The evidence is now in favor of giving such patients a blocker of the renin-angiotensin system (RAS)—such as an ACE inhibitor or ARB—with a calcium-channel blocker or diuretic." However, he stressed: "This does not mean that other combinations cannot be used or are not useful."

Another issue that was debated was whether the use of an ACE-inhibitor/ARB combination "should be banned," on the basis of the ONTARGET findings, he noted. But he indicated this would likely not be the case, "because this remains an effective treatment to lower proteinuria compared with single blockade of the RAS system, and this is regarded by nephrologists to be important whenever proteinuria is not reduced sufficiently by one agent.

"But, of course, the data from ONTARGET cannot be forgotten," he stressed, "which means dose titration must be cautious, with frequent monitoring of renal function and BP and close attention to environmental circumstances that might reduce bodily fluids."

Related links

- Give blood pressure drugs to all [Hypertension > Hypertension; May 22, 2009]
- Return of the J-curve: TNT analysis shows that BP can be too low in CAD patients [Clinical cardiology > Clinical cardiology; May 08, 2009]
- HYVET: BP lowering reduces fatal stroke, all-cause mortality in the elderly [HeartWire > Medscape Medical News; Mar 31, 2008]
- New UK hypertension guidelines omit beta blockers for routine use [HeartWire > News; Jul 06, 2006]
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# 1 of 3 June 20, 2009 02:59 (EDT)
Dr.Hamdy ALmaghraby

The combination of ACEI and ARBS benefits

Prof.Dr.Mancia

regardless HTN with proteinuria, is there any advantage of ACEI + ARBS, for managing uncomplicated HTN and managing congestive heart failure?

In practical situations, do you try that combination? and what was the result? I mean, the benefits deserve that combination?

Thanks a lot
Dr.Hamdy

# 2 of 3 June 21, 2009 09:56 (EDT)
vern chichak

combinations

evidence-based medicine tells me that the addition of a maximal tolerated dose of an ACE to a maximal tolerated dose of an ARB provides only modest improvement in blood pressure and for this reason I wouldn't use the comb of the ACE/ARB-the situation is somewhat different with CHF and proteinuric CKD where the comb obviously deserves some merit and as an evidence-based believer would use the combination.

# 3 of 3 June 21, 2009 11:17 (EDT)
vern chichak

guidelines

is the J curve best explained in these specific patients being in poorer general health?? a J curve has been demonstrated for reductions of diastolic levels that start above 90 at least caution is needed nonetheless many more pts are threatened by too little reductions in blood pressure than by too much. I doubt that JNC 8 will backtrack their thiazide position after all they often quoted ALLHAT !!!!!