Editorial

James V. Felicetta, MD
Editor-in-Chief

The Lowdown on Hypertension in the Elderly

Let's talk about the treatment of hypertension in very elderly individuals—those who are 80 years of age or older. Today's editorial represents a bit of a course change for me. In several recent editorials, I've railed against the mindless idea that "lower is always better," and that we should always try to drive our patients' blood pressures as low as we possibly can. I've argued mightily that the simplistic notion that lower is always better completely ignores the fact that patients with different blood pressure levels have inherently different physiologic set points.

Trying to drive down the blood pressures of the physiologically perturbed with the aggressive use of antihypertensive medications may be pointless at best and downright counterproductive at worst. For example, the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial, in which I was privileged to participate, demonstrated quite definitively that a systolic blood pressure goal of under 120 mm Hg is no better than a more modest goal of under 140 mm Hg in patients with diabetes.

IS LOWER REALLY BETTER?

Today, I need to switch gears and tell you that, in the treatment of most elderly patients, lower is, in fact, usually the better choice. That's because the elderly already tend to have impressive elevations in their systolic blood pressure levels. It's not at all unusual to see octogenarians with blood pressure levels in the range of 170 mm Hg, 180 mm Hg, or even higher. So, with tighter control, we're only talking about getting their pressure lower than 140 mm Hg, not to the more aggressive goals that haven't panned out in trials with younger patients. But, surprisingly, a large number of very elderly individuals seem to be deceptively tolerant of their high blood pressures, without any apparent impairment of their cognitive function and without any hints of cerebral or cardiac ischemia. Indeed, it was long held that a real "head of steam" was critical in the elderly, to pump blood through vessels already substantially clogged with atherosclerotic deposits.

An authority as prominent as Paul Dudley White, the world-famous cardiologist, best known as President Dwight Eisenhower's doctor, wrote in 1937 that "for aught we know, in advanced cases with permanently narrowed coronary and cerebral arteries, the hypertension may be an important compensatory mechanism which should not be tampered with."[1]

The VA Cooperative Trials, beginning in the late 1960s, first demonstrated that treating extreme degrees of hypertension results in fewer cardiovascular events than simply leaving the pressure alone. But all of these studies were done in considerably younger patients. These younger patients had presumably not yet experienced the debilitating effects of years of accumulation of atherosclerotic plaque in their blood vessels.

Until recently, it remained an arguable position that aggressive control of blood pressure in the very elderly might very well be unjustified, particularly in view of the propensity of the elderly to experience unfortunate effects of antihypertensive medications, including dizziness, lightheadedness, and postural hypotension.

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A DEFINITIVE ANSWER

It turns out that a landmark trial actually resolved this question rather definitively a couple of years ago. I can hardly blame any of you for not having it at the tip of your tongue, because we are all bombarded on a daily basis with a plethora of clinical trial results, all clamoring rather cacophonously for our very limited attention.

The trial I'm referring to here is the HYVET Trial, whose name does not refer to a casual greeting offered either to a deserving veteran or a friendly veterinarian. Rather, the acronym stands for the HYpertension in the Very Elderly Trial. This was a carefully performed trial, in which, a total of 3,845 subjects aged 80 years and older with systolic blood pressure levels between 160 mm Hg and 180 mm Hg were randomized to receive either treatment to drive their blood pressure levels down under

150/80 mm Hg, or to simply receive placebo therapy. There was nothing unethical about including the placebo wing, because a smaller pilot HYVET Trial had actually shown worse outcomes in the treated group than in the placebo group. The trial was a bit distorted because the pharmaceutical sponsors dictated the specific agents to be used (indapamide and perindopril were the main therapeutic modalities), but this was not at all a fatal flaw.

It is indeed very fortunate that the larger trial went forward in spite of the very concerning and discouraging results from the pilot trial. The larger trial confirmed the true value of treatment in the 80-years-and-older population. The trial was actually terminated early by the safety monitors, after just a median of 1.8 years of follow-up, because of a full 21% reduction in the relative risk of death from any cause. This mortality reduction was accompanied by an even more impressive 64% reduction in the risk of heart failure, and a very nice 30% reduction in the relative risk of stroke.

So the data are in, and no study will ever again revisit the issue of whether to treat elevated blood pressure levels in the very elderly. Any such trial now would be thoroughly unethical because HYVET has demonstrated unequivocally that the results are more favorable with treatment than without. But, remember that these are patients who are starting out with very, very elevated levels of systolic blood pressure. They must be treated without any bias because of their advanced years. And, indeed, their relative risk of cardiovascular disease in the near term is markedly elevated compared with that of younger individuals. These results do not, in any way, shape, or form, imply that lower is always better. Lower is indeed better if you start with absurdly high blood pressure. Thus these particular results need to be kept in the context of the study patients in whom they were collected, the very elderly with very high blood pressure levels. ●

Author disclosures

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REFERENCE

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