Noncardiovascular Illness as Barrier to Antihypertensive Treatment

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Control rates of hypertension vary from one country to another, but in general, they are much lower than would be desirable. In the United States, the National Health and Nutrition Examination Survey showed that the awareness of the hypertensive population improved from 50% in the 1970s to 70% in the 1990s. Over the same time interval, the proportion of treated hypertensive patients with normalized blood pressure rose from 10% to 29%. Recent studies in Europe and other parts of the world confirmed that the rule of halves still exists and that the fractions of hypertensive patients with properly controlled blood pressure range from ∼5% to 45%. Patients with high blood pressure not carrying out recommended therapy is a pervasive phenomenon that contributes worldwide to the low control rates of hypertension.

Adherence, in a more judgmental way, also termed compliance, is the extent to which a patient’s behavior coincides with the clinical prescription. It usually increases with higher education, affluence, social support, and the frequency and quality of the interactions with the care providers, but it diminishes with the number of tablets to be taken. Other frequently cited reasons for not filling prescriptions are the fear that antihypertensive drugs cause side effects and the misconception that hypertension, a silent condition, carries little risk. Here, the article by Wang et al breaks new grounds. Using a retrospective cohort design, they studied 51,517 patients ≥65 years of age who were enrolled in the Pennsylvania Pharmaceutical Contract for the Elderly Program (PACE). These participants paid only $6 per prescription. Wang et al identified the presence of noncardiovascular disorders as a key determinant leading to nonadherence to antihypertensive drug treatment. With proper adjustments applied, use of antihypertensive drugs was consistently 40% to 60% lower in patients with obstructive bronchial diseases, depression, gastrointestinal disorders, and osteoarthritis compared with those without such conditions. In line with the literature, younger elderly, women, and patients with cardiovascular disorders or diabetes mellitus were significantly more likely to be taking antihypertensive medications.

Wang’s study must be interpreted within the context of the limitations inherent to its retrospective design. No blood pressure readings were available to substantiate the diagnosis of hypertension. Further research should clarify whether Wang’s observations also apply to young or middle-aged adults or to patients with different socioeconomic or cultural backgrounds. However, the most intriguing issue to be addressed in future research is whether nonadherence to antihypertensive drug treatment in the presence of noncardiovascular disorders truly reflects noncompliance of patients as opposed to the attitude of physicians. According to standing guidelines, doctors have to introduce the concept of global risk to patients and to convince them of the benefits of blood pressure-lowering treatment. They have to individualize treatment, anticipate interaction between medicines, and respond quickly and effectively to adverse effects caused by drug regimens. In some instances, doctors treating PACE patients might have deliberately opted for not instituting antihypertensive treatment because of a dire short-term prognosis of a noncardiovascular illness. On the other hand, conditions such as obstructive bronchial diseases or osteoarthritis often require drugs that tend to increase blood pressure and therefore might make antihypertensive treatment even more indicated.

Patients, medical professionals, and health care organizations can implement multiple strategies to strengthen adherence to antihypertensive treatment. In light of Wang’s study, 2 potentially interesting approaches deserve to be discussed briefly. First, self-measurement of blood pressure increases adherence to antihypertensive drug treatment. However, the manufacturers of devices for self-measurement have over-taken regulators. That the distribution channels of these devices span department stores and postorder companies is unlikely to promote the accurate application of the self-measurement technique and the correct interpretation of self-measured blood pressure values. In contrast to current practice, regulators should guarantee the accuracy of blood pressure measuring devices, oversee their independent verification and certification, impose obligatory checks of the calibration of these devices during long-term use, and provide rules for their distribution and use. Second, combination tablets physically reduce the number of tablets to be taken each day and potentially improve patient compliance. Whereas polypills with indications for diseases affecting different organ system are hard to image, those with indications within the cardiovascular field are on the horizon, for instance, for controlling the risk associated with hypertension and hypercholesterolemia. However, prospectively designed...
outcome trials should prove that intervention with the overall cardiovascular risk reduces cardiovascular complications in patients in whom none of the established risk factors constitutes a compelling indication for drug therapy.

The findings of Wang et al must be gauged against the background of the current control rates of hypertension and the poor prognosis associated with an elevated blood pressure. In a quantitative overview of 61 cohort studies with >1 million enrolled subjects, the Prospective Studies Collaboration demonstrated that small gradients in blood pressure accounted for sizeable differences in cardiovascular outcomes. Along similar lines, several recently published outcome trials in hypertensive patients or in patients at high cardiovascular risk proved that reducing systolic blood pressure by 1 to 3 mm Hg decreased the risk of major cardiovascular complications by as much as 20% to 30%.

The American Heart Association proclaimed May 2005 as American Stroke Month, with the slogan, “Time lost is brain lost.” This motto not only applies to acute stroke but also to the prevention of the cardiovascular complications of hypertension in general. Indeed, the Systolic Hypertension in Europe Trial and the Valsartan Antihypertensive Long-Term Use Evaluation Trial irrevocably highlighted the overwhelming benefits of early versus delayed blood pressure control. Wang’s enlightening article should remind patients and health care providers that this adage also applies in the prevention of the cardiovascular complications of hypertension and implementation of World Health Organization/International Society of Hypertension risk stratification in primary care in Belgium. The findings of Wang et al must be gauged against the background of the current control rates of hypertension and attributable risk of cardiovascular disease.

References
