Fixed-Dose Combinations and Hypertension Control in Community-Based Practices

Application of the “Keep-It-Simple” Principle

Brent M. Egan

The article by Feldman et al1 in the present issue of Hypertension documents that solo practitioners in the community can control blood pressure in more than half (≈53%) of their uncomplicated, uncontrolled hypertensive patients by following the well-established, guideline-recommended, stepped-care algorithm. The solo practitioners achieved even better results, controlling ≈65% of these uncomplicated hypertensives, using fixed-dose combination-based therapy and a simplified management algorithm.

This study adds to the literature on fixed-dose combinations by demonstrating that the superior efficacy2 documented in controlled clinical trials translates into improved blood pressure control in community-based practices. It also demonstrates that primary care providers using the fixed-dose combination simplified algorithm are more satisfied with the care provided to their hypertensive patients, perceive it to be more effective, and are more likely to recommend the approach to a colleague than clinicians using the current guidelines. They also viewed this approach to be at least as sustainable as current guidelines. The fact that patients in clinics assigned to the fixed-dose combination arm received more classes of antihypertensive medications but fewer dose equivalents than patients in clinics assigned to the then-current guideline is consonant with the assignment and effectiveness of comparatively low-dose fixed combinations used. As the authors concluded, the results are consistent with the known additive blood pressure–lowering effects of the fixed-dose combinations selected and the evidence suggesting that patient adherence is also better.3

Recent reviews of barriers to implementing evidence-based guidelines in clinical practice consistently identify complexity of the intervention, as well as time and other resource requirements, as major obstacles.4,5 The fixed-dose combination simplified algorithm approach constructively addresses these barriers and, in fact, yields better blood pressure control. The current study represents an important step toward the practical clinical trials needed to drive significant improvements in population blood pressure control.6

In this regard, it is noteworthy that the National Health and Nutrition Examination Surveys for 2001–2002, 2003–2004, and 2005–2006 all showed that 64% of treated hypertensive patients in the United States had a blood pressure <140/ <90 mm Hg.7,8 Although population blood pressure control increased from 30% to 44% over that time, the progress reflected improvements in the percentage of hypertensives who were aware and treated. To realize greater population benefits of evidence-based medicine, the proportion of treated hypertensives controlled must increase. If we conservatively assume that half of the treated, uncomplicated hypertensives are uncomplicated (36% of total, or 18%) and that 60% of them would be controlled with the approach described, then control rates would improve from 64% to 75% of treated hypertensives. Population blood pressure control in the United States would rise from 44% to 51%, and the Healthy People 2010 objective of controlling ≥50% of all hypertensives would finally be realized.9

The study by Feldman et al1 suggests that further practical clinical trials using fixed-dose combinations and a simplified treatment algorithm are needed and justified to explore this promising lead. These trials should also include fixed-dose combinations of renin-angiotensin system and dihydropyridine calcium channel blockers, given excellent efficacy for controlling blood pressure and superior outcomes compared with fixed-dose combinations of diuretic and angiotensin-converting enzyme inhibitor.10 In addition to evaluating effectiveness, safety, and outcomes, these practical clinical trials must include a fully representative range of community-based practices, especially those with significant resource limitations, where the barriers to implementing evidence-based guidelines are often greatest.6 In an ever increasingly complex world, the old adage, “keep it simple (stupid),” may just be one of the keys to better cardiovascular health in the years ahead.

Disclosures

None.
References


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