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, uncontrolled 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.

© 2009 American Heart Association, Inc.
Hypertension is available at http://hyper.ahajournals.org
DOI: 10.1161/HYPERTENSIONAHA.109.128678
References


Fixed-Dose Combinations and Hypertension Control in Community-Based Practices.
Application of the "Keep-It-Simple" Principle
Brent M. Egan

Hypertension. published online February 23, 2009; Hypertension is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2009 American Heart Association, Inc. All rights reserved.
Print ISSN: 0194-911X. Online ISSN: 1524-4563

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://hyper.ahajournals.org/content/early/2009/02/23/HYPERTENSIONAHA.109.128678.citation

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Hypertension can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Hypertension is online at:
http://hyper.ahajournals.org/subscriptions/