Heart disease is undertreated in patients with high blood pressure
Switching patients to a single combined blood pressure lowering medication can save money

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Australian GPs are mostly using blood pressure targets that are consistent with national guidelines but they are under-treating coexisting heart disease (O'Riordan S, Mackson J, Weekes L. J Clin Pharm Ther 2008; 33:483-488). A report from a nationwide clinical audit found that in both 2003 and 2004 GPs selected target blood pressure levels (either 140/90 mmHg or 130/85 mmHg) that were consistent with guideline recommendations for 89% of patients overall, with 58% (2003) and 70% (2004) of these patients achieving the target blood pressure. However, in 2004 only half of the patients with coexisting heart failure were prescribed an ACE inhibitor, and only half the patients with a previous history of heart attack were being treated with an ACE inhibitor or a beta-blocker. The management of hypertension in people with coexisting diabetes improved over the same time period with 43% of diabetic patients having a target blood pressure consistent with guidelines in 2003 compared with 86% of patients in 2004. There was a corresponding increase in achievement of blood pressure control in these diabetic patients from 55% in 2003 to 59% in 2004. While these improvements are almost certainly implausibly large, the data do suggest that the management of high blood pressure in general practice is improving. However, there would appear to still be considerable room for the enhanced management of coexisting conditions.

Expert comment

Treatment guidelines for the management of high blood pressure are recommendations for the average or typical patient. As such, even if management of patients is ideal, we shouldn't expect that all patients are treated according to guidelines and achieve recommended targets. Nevertheless, it can be instructive to assess how many patients are being treated according to guidelines, especially where trends over time can be observed. The report by O'Riordan et al presents results from a substantial proportion of Australian GPs. Unfortunately, the data are self-reported by GPs, raising the possibility of bias in the results, which would likely favour results that show good management, though this effect would not be expected to change over time. The challenges of this type of data collection are illustrated by the change in the proportion of diabetic patients for whom a guideline-approved blood pressure target was being used. It increased from 43% to 86% in just one year. This major change in practice over such a short time period seems highly unlikely to be correct. In the same 12-month period, the percentage of patients achieving guideline-approved blood pressure targets increased from 58% to 70% - also a surprisingly big change.

The outstanding finding of this report is the under-use of ACE inhibitors and beta blockers in hypertensive patients with heart failure and previous MI. The first high-quality randomised controlled trials to show the benefits of these agents in these conditions are now 15-20 years old, so it is disappointing that there are still problems in incorporating these findings into routine clinical practice. The two most important actions that should come out of this report are an attempt to increase the use of these agents for appropriate patients and further research to try and understand the barriers to their usage.

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Switching patients who are receiving two separate blood pressure lowering medications to a single combination product can produce substantial cost savings for the health care system (Stankus V, Hemmelgarn B, Campbell NRC, et al. Can J Clin Pharmacol 2009; 16:e151-e155). A study in Canada has estimated that switching just 60% of Canadian patients receiving separate prescriptions for two drug classes (an ACE inhibitor/ARB and a thiazide diuretic) to a combination product on one prescription would save the Canadian health system $27 million a year. In Canada, 27% of patients receiving an ACE inhibitor and 21% of patients receiving an ARB also receive a thiazide diuretic as a separate prescription. This strategy may also improve the management of high blood pressure since the use of combination products has been shown to enhance compliance. Additionally, more patients prescribed monotherapy with an ACE inhibitor, ARB or thiazide diuretic fail to reach recommended blood pressure targets and the switch to dual therapy should improve upon this. A simple review of prescription records could identify patients who could be switched to a fixed-dose blood pressure lowering combination product.

Expert comment

The paper by Stankus et al has a simple but important message – there would be considerable benefits from switching people treated with separate antihypertensives to combination medicines containing the same components. Given the considerable economic benefits to the health system and the clinical benefits from improved adherence (not quantified here, but likely to be 15-30%), the challenge seems to be how best to implement such findings. This, and related interventions, will no doubt benefit from greater collaboration between GPs and pharmacists and better electronic tools for GPs to review their current prescribing. This research represents the clearest driver for an increasing role of combination medicines in reducing the burden of high blood pressure. However, other strands of evidence are also emerging – for example, the potential benefits of low dose combinations, and another recent Canadian study that showed a simplified strategy based on initial use of combination medications improved outcomes when compared to a traditional monotherapy-based regimen.

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