Tip 14 (June 2010)

Aim To Achieve Target Blood Pressure Within Three Months

I alluded to the importance of timely achievement of blood pressure targets in my "Tip" and "Comment" of May 2010, and the importance of the use of blood pressure algorithms and regular titration visist to achieve these. I wish again to emphasise those principles here, and to suggest that when you are starting a new patient on antihypertensive medication you should take a note of the date, and make a contract with yourself and the patient to have the blood pressure at target within three months.

Good long term outcomes in hypertension depend on achieving target blood pressures, and, it is increasingly evident, doing so in a short period of time[1,2]. In the VALUE[3] and ASCOT[4] trials blood pressures attained at 3 months predicted long-term outcome. In addition, other trials, like ALLHAT[5] have shown that blood pressure differences in treatment groups achieved in the first few months of a 5 year trial tended to persist throughout the trial despite repeated encouragement of investigators to achieve blood pressure control. The old adage "start low and go slow" with blood pressure medication mitigates against an aggressive approach to blood pressure management and encourages "clinician intertia" and results in patients being seen on multiple occasions with blood pressure not at target but not having their medications adjusted [6].

Part of the problem is reluctance of clinicians to add medications and titrate doses upwards is a (usually misplaced) concern about inducing unacceptable hypotension[1], and also a reluctance to following the JNC-7 guideline[2] which suggests starting (previously untreated) patients with stage 2 hypertension on combination therapy de-novo. I also believe that the necessity to check renal function and electrolytes a couple of weeks after initiating or increasing diuretic, ACE-inhibitor or ARB therapy serves as a disincentive to make frequent changes, as does the advice in the 2009 NZ Cardiovascular Guidelines Handbook[7] that "low dose combination therapies can maximise effectiveness and help minimise side effects". I tend to think of combinations like 0.5mg cilazapril + 2.5mg felodipine + 2.5mg bendrofluazide not as combination therapy but as "homeopathy".

If target blood pressure (< 140/90 or < 130/80 in individuals with diabetes, chronic kidney disease or cardiovascular disease) is not achieved after three months, it is time to take stock and review. Does the patient have "resistant hypertension" as definde (see Tip 1, May 2009)? Is specialist referral warranted? If blood pressure is not at target by this time, long term outcomes are compromised and it is your responsibility to change these.

1.Berlowitz DR,Franklin S. The Clock is ticking: The case for achieving more rapid control of hypertension. J.Clin.Hypertens.2010;12:323-327

2.Chobanian AV, Bakris GL, Black HR et al. The Seventh Report of the National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure:The JNC 7 Report. JAMA.2003;289:2560-2572

3. Julius S et al. Outcomes in hypertensive patients at high cardiovascular risk with treatment regimens based on valsartan or amlodipine: the VALUE randomised trial. Lancet 2004;363:2022-2031

4. Dahlof B et al. Prevention of cardiovascular events with an antihypertensive regimen of amlodipine adding perindopril as required versus atenolol adding bendroflumethazide as required in the Anglo-Scandanavian Cardiac Outcomes Trial – Blood Pressure Lowering Arm (ASCOT-BPLA): a multicentre randomised study. ASCOT investigators. Lancet 2005;366:895-906

5. ALLHAT Officers and Coordinators for the ALLHAT Collaborative Research Group.The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial. JAMA. 2002 Dec 18;288(23):2998-3007

6. Okonofua EC et al. Therapeutic inertia is an impediment to achieving the Healthy People 2010 blood pressure control goals. Hypertension 2006;47;345-351

7. www.nzgg.org.nz/guidelines/0154/090202_CVD_web_pdf_Final_pdf