Hypertension in young adults

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Hypertension is common, even in young adults. The NHANES survey 2011–2012 put the incidence of hypertension in the 18–39 year age group at 7.3%. There are no outcome studies of hypertension treatment in young adults, but short to medium-term risks (5–10 years) of untreated mild and moderate hypertension are likely to be low. However, long-term outcomes (30–40 years) are much more important to people in their 20s than to those in their 60s and 70s and it seems likely that hypertension from a young age, particularly if undiagnosed or untreated for a long period of time would carry a very substantial long-term cardiovascular risk.

General practitioners may be reluctant to make a diagnosis of hypertension in a young person, and may also lack confidence about how to investigate and treat it. There is evidence that hypertension in this age group is less likely to be diagnosed or treated even when young individuals have good access to primary care.

Between 22 February 2009 and 10 June 2013, 1000 consecutive new patients were seen through the North Shore Hospital Hypertension Clinic; mean age 55 years. From this group we extracted and reviewed the data on those aged 30 years or less at their first visit.

Ninety-two (9.2% of the total) were aged ≤30 years on the date of their first clinic visit (range 15–30 years, mean age 24); 70 were European, 9 Asian, 8 Māori and 9 Pacific people. 24-hour ambulatory blood pressure monitoring was used in 51 patients (55%).

Average number of clinic visits was 2.6 (1–8). Secondary causes were identified in 12 (13%) patients: primary renal disease (6), obstructive sleep apnoea (5), primary aldosteronism (1). Average BMI was 31.8.

Forty-seven (51%) were on antihypertensive medication at the first clinic visit, and 53 (58%) at discharge. Mean blood pressure at the first visit for all patients was 145/86 mmHg. Mean discharge blood pressure was 129/75 mmHg and mean blood pressure drop was 16/11 mmHg.

Of those on antihypertensive medication, both at admission and discharge average number of drugs used was 2, although there was increased use of ACE-inhibitors and DHB calcium channel blockers, and reduced use of thiazide diuretics and beta blockers on discharge.

At discharge, the 92 patients could be categorised as follows:

- 41 – Essential hypertension on antihypertensive medication.
- 12 – Secondary hypertension on antihypertensive medication.
- 27 – Prehypertension (BP 120–139/80–89) not currently on antihypertensive medication.
- 12 – White coat hypertension not currently on antihypertensive medication.

In other words none of the patients was completely “normal”. Clearly those with treated essential hypertension and secondary hypertension require long-term monitoring and follow-up.

Prehypertension is not a completely benign condition, despite not mandating blood pressure medication immediately; it has been shown that the majority of individuals with prehypertension will progress to hypertension.

White coat hypertension, similarly, despite not mandating immediate use of antihypertensive medication does not have the same prognostic implications as true normotension; it confers a
significantly higher risk of progression to chronic hypertension, and separate from that, also a higher stroke risk. In short, all 92 patients aged 30 years and less referred to the hypertension clinic, including the 39 (42%) discharged on no antihypertensive medication were at significantly higher risk for long-term cardiovascular complications than age-matched individuals from the general population.

An additional important consideration in young individuals with treated hypertension and those with prehypertension is that they are at an age where lifestyle intervention may provide an important component both in the treatment of hypertension, and in the prevention of, or delayed progression to established hypertension. This is particularly relevant to our group of young patients whose mean BMI (30.8) was significantly above the healthy range.

Hypertension is by no means uncommon in very young adults, whose lifetime risk of cardiovascular disease and premature death may be substantially higher than those who develop hypertension in middle-age or later life. Although secondary causes of hypertension do occur, the majority still have essential hypertension.

All young adults, including adolescents should have an annual blood pressure check, and whilst a one-off elevated reading does not make a diagnosis of hypertension, it should not be ignored, and the individual should be recalled for further evaluation.

24-hour ambulatory blood pressure monitoring should probably be mandatory for diagnosis of hypertension in young people, and is particularly useful prior to commencing medication.

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References


