

The benefits of anti-hypertensive therapy are well documented in the literature. We have guidelines for initiation of therapy and the target lowering levels. However, these studies are almost exclusively done on younger individuals where primary prevention benefits are evident. What about the elderly, particularly the oldest of the old?

There are several issues that need to be considered. What are appropriate targets for blood pressure lowering? We are well aware of drug interaction with polypharmacy and the risk of adverse effects.

A study published in the Journal of the American Medical Directors Association in 2012 was a longitudinal study on hypertension and 5 year mortality among 85 year olds. At five years 28.3% died. The subjects with BP controlled on treatment tended to have the worst survival. Some studies show higher blood pressures are associated with better outcomes in men over 75 and women over 85. A higher blood pressure at 79 than at age 70 or at age 75 is correlated with survival to age 90.

The Hyvet Pilot 2003 study on stroke prevention and mortality was with individuals 80 years and older and with systolic blood pressure greater than 160. At four years the BP lowering was 22.5/11 mmHg. There was a 50% reduction in stroke, which was significant. However survival was reduced by 1.5% with treatment, which was not significant. The Hyvet 2008 showed a 30% reduction in stroke and an increased survival of 2.2% (both significant). However this study excluded those with heart failure, renal failure, high or low potassium, gout, dementia, a requirement for nursing care and a standing BP of <140 mmHg. The Invest sub-study of 2010 showed increased hazard risk if BP was <80 diastolic and <140 systolic.

The Cochrane Review of 2009 showed that treatment of healthy persons aged 60-80 years with moderate to severe hypertension reduces all cause mortality and cardiovascular mortality and morbidity. Treatment of healthy persons 80 years and older with moderate to severe hypertension reduces cardiovascular mortality but no all cause mortality.

There are risks of antihypertensive therapy including orthostasis, falls, electrolyte disturbances polypharmacy and increased mortality. The benefits of treating hypertension are uncertain in the frail elderly.

Recommendations:

- Do not consider treatment unless systolic BP >160 mmHg.
- Do not treat to systolic BP of <140 mmHg.
- Check and recheck for orthostatic fall of BP
- Actively reduce anti-hypertensive therapy with the above goals in mind.