Cochrane Corner

Hypertension in the elderly: When to start and when to stop

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Elderly persons have higher prevalences of hypertension than younger and middle-aged persons and elders with hypertension have a much higher risk of cardiovascular morbidity and mortality than middle-aged persons with hypertension. Despite the higher prevalence and risk in older persons, most early randomised controlled trials evaluating antihypertensive drug therapy were conducted in middle-aged persons. The articles included in this review had to be randomised controlled trials of at least one year duration in hypertensive elders (at least 60 years old) assessing antihypertensive drug therapy and providing morbidity and mortality data. The first randomised trial of antihypertensive patients was done in 1969 and it found an NNT of six over one year in patients with blood pressure of 115 mm Hg to 129 mm Hg. The NNT for lower levels of blood pressure (and absolute risk) was much lower than this.

Authors' conclusions

Randomised controlled trials establish that treating healthy older persons with hypertension is highly efficacious. Benefits of treatment with low dose diuretics or beta-blockers are clear for persons in their 60s to 70s with either diastolic or systolic hypertension. Differential treatment effects based on patient risk factors, pre-existing cardiovascular disease and competing co-morbidities could not be established from the published trial data. One long-acting calcium channel blocker was also effective in systolic hypertension.

Bottom line

- ***Should we treat hypertension in the elderly?*** Yes
- ***Should we discontinue at any stage?*** Evidence from other studies would suggest that once you are on antihypertensive medication there are benefits from continuing unless having untoward adverse effects from medication.
- ***Should we start antihypertensive treatment in the very elderly?*** This is the subject of a current trial. At least one of the studies in this review included patients up to age 85 years. After this clinical judgment is required. Treating patients with increasing age up to the very elderly has brought about increased benefit in absolute terms and this needs to be balanced against expected years gained and potential harms from medication.

	Success	Evidence	Comment
Mulrow[1]	A relative risk of 0.73 which translates to an NNT of 6 for 1 year and up to 39 for 5 years to prevent a cardiovascular event	Cochrane review[1]	New Zealand Guidelines Group recommends diuretics first and long acting calcium channel blockers where diuretics are contraindicated for isolated systolic hypertension. They also recommend diuretics, beta blockers, ACEs and long acting calcium channel blockers.

NNT = numbers needed to treat for one remission

References

1. C Mulrow, J Lau, J Cornell, M Brand. Pharmacotherapy for hypertension in the elderly. The Cochrane Database of Systematic Reviews 1998, Issue 2. In 2006 Art. No.: CD000028. DOI: 10.1002/14651858.CD000028.