The Downside of Antihypertensives in the Elderly: Hip Fractures

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The benefits of antihypertensives in the elderly should be unquestioned—especially since SHEP and its revisit. Avoiding them will create more problems. But caution can be exercised with these specific measures.

In a previous commentary, I extolled the benefits of antihypertensives in the elderly. The source for my recent enthusiasm was a 22-year follow-up to the SHEP study. Follow-up of the initial cohort after 2+ decades revealed that each month of active treatment with chlorthalidone was associated with a 1-day extension of life.

It is painful for this author—particularly as a hypertension specialist—to now add a caveat. A recent article identified a worrisome downside of treating hypertension in the elderly.

Butt and coworkers studied 301,591 newly treated, community-dwelling hypertensives older than 66 years (mean age 81 +/- 7.3 years). The study was a population-based, self-controlled design that used a health care administrative database to identify persons who had initiated antihypertensive therapy. The risk period for the target outcome—hip fracture—was 45 days following the start of blood pressure–lowering medications.

Elderly persons who began antihypertensive therapy experienced a 43% increased risk of hip fractures in the initial 45 days of therapy. All the medications used to treat blood pressure increased the incidence rate ratio (followed by confidence intervals) of the complication—thiazide diuretics, 1.33 (0.94-1.88); ACE inhibitors, 1.53 (1.120-2.10); angiotensin receptor blockers (ARBs), 1.41 (0.65-3.05); calcium channel blockers (CCBs), 1.30 (0.83-2.02); and beta-blockers, 1.58 (1.01-2.28). Only 2 classes of agents—ACE inhibitors and beta-blockers—achieved statistical significance.

The prevailing suspicion (not surprisingly) is that falls and hip fractures are a consequence of orthostatic hypotension. Additional pathology may occur with specific agents such as beta-blocker effects on pulse, for example, or first dose hypotension (venodilation) with ACE inhibitors.

What is a clinician to do in response? First of all, the benefits of antihypertensives in the elderly should be unquestioned—especially since SHEP and its revisit. Avoiding them will create more problems. But caution can be exercised in a number of ways:

1. Do not start multiple medications at one time.
2. Initiate lower doses and titrate upward carefully.
3. Measure orthostatic blood pressures at office visits.
4. Be sensitive to complaints of lightheadedness or dizziness.
5. Ask caregivers to be particularly alert for fall risks after the patient assumes an upright posture, particularly at night. Unsupervised walks to the bathroom in the dark are dangerous.
6. Provide written rules to withhold or decrease antihypertensive medications if intercurrent illnesses cause potential volume depletion.

Treatment of high blood pressure in the elderly is a special circumstance. Elevated blood pressures are bad, but so are lower pressures—especially when geriatric persons assume upright posture. Older folks are not the same as other hypertensives. Postural hypotension can be fatal.

References


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