

Guidelines serving to guide practicing physicians

Comment on the paper by Tomasik et al.

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The guidelines by Tomasik et al.¹ are remarkable. They are remarkable not only because they are thorough clinically and extremely pertinent but also because they are eminently readable and, thereby, exceedingly helpful to the practicing physician. We should remember that solid evidence telling us who, how, and when to treat in the geriatric population is still very fragmentary. Evidence gathered in such trials as Syst Eur, Systolic Hypertension in the Elderly Program (SHEP), and HYpertension in the Very Elderly Trial (HYVET), cannot be uncritically applied to elderly patients sitting in the front of you because stringent inclusion criteria in these trials resulted in recruitment of a very healthy elderly population. As an example, of every 100 patients who were contacted in the SHEP trial, 12 met the initial study criteria, 3 completed a baseline visit, and only 1 underwent randomization. Thus, 99% were excluded mostly because of comorbid conditions. Yet the major difficulties in treating the hypertensive elderly patient are exactly the comorbid conditions. Here, the guidelines by Tomasik et al.¹ appropriately mention the so called geriatric giants: dementia, depression, falls, incontinence, and malnutrition. Therefore, the simple question to be answered is how the presence of one of these giants should affect the selection of antihypertensive therapy.

Geriatric giant 1: Dementia Dihydropyridine calcium channel blockers (CCBs), angiotensin receptor blockers, and some angiotensin-converting-enzyme inhibitors (ACEIs) have been documented to have some beneficial effect on dementia. In contrast, in the SHEP trial, chlorthalidone had no effects on cognitive function and β -blockers may have detrimental effect. Although the above evidence is not ironclad, it seems worthwhile to start out, in a patient with cognitive dysfunction

or dementia, either with a CCB or a renin-angiotensin-system (RAS) inhibitor.

Geriatric giant 2: Depression Very little is known on the effects of antihypertensive therapy on depression. Clearly, β -blockers are not a good choice since depression is one of their well-documented adverse effects. Apart from that, all antihypertensive drug classes can probably be used in a patient with depression.

Geriatric giant 3: Falls A recent Canadian study has documented an immediate increase in falls and hip fractures during the first 45 days following initiation of antihypertensive therapy. Although this risk was most significant with ACEIs and β -blockers, there seemed to be no meaningful differences between the drug classes. One would expect a greater risk of falling with antihypertensive drugs that can cause orthostatic hypotension such as RAS blockers, particularly in combination with a thiazide diuretic or with drugs that interfere with the neuro-reflex mechanism to compensate for the upright posture such as α - and β -blockers. Dihydropyridine calcium blockers should be less prone to cause falls because they act more on the arteriolar than on the venous side of the capillary bed.

Geriatric giant 4: Incontinence Low-grade incontinence may be a relative contraindication for the use of a thiazide or loop diuretic for obvious reasons. Full-blown incontinence does not present a contraindication to any specific antihypertensive drug.

Geriatric giant 5: Malnutrition We just should remember that many antihypertensive drugs have some metabolic side effects and that these effects may affect antihypertensive response. β -blockers

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Received: June 17, 2013.
Accepted: June 18, 2013.
Conflict of interest: F.H.M. is an ad
hoc consultant for the following
organizations: Novartis, Daiichi
Sankyo, Pfizer, Takeda, Abbott,
PharmApprove, Gilead, Servier,
Bayer, Medtronic, and Ipca
Laboratories Ltd.
Pol Arch Med Wewn. 2013;
123 (7-8): 353-354
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are known to cause weight gain; a recent study in a clinic for diabetes showed that patients on β -blockers were 19 lbs heavier than those not on a β -blocker. Of note, hyperkalemia and hypomagnesemia are well-known risk factors for arrhythmia including atrial fibrillation. Clearly, thiazide diuretics should be avoided in that situation. Alcohol abuse and/or a high salt intake can be an underlying mechanism of treatment-resistant hypertension. Vitamin D deficiency is known to stimulate the renin-angiotensin cascade, conceivably making these patients more responsive to the RAS blockade.

Not unexpectedly, Tomasik et al.¹ give us the option to start an elderly patient on a RAS blocker, or a CCB, or a thiazide diuretic. They rightly state that " β -blockers should not be used as first-line therapy without a compelling indication to do so." Inefficacy of β -blockers, possibly due to their pseudo-antihypertensive effect has been amply demonstrated in the elderly. Tomasik et al.¹ voice their preference of starting on a low dose of a thiazide diuretic, namely, 12.5 mg of hydrochlorothiazide, but agree that "Thiazide-like diuretics (chlorthalidone, indapamide) seem to be more effective in elderly hypertensive patients". I am somewhat concerned by this general recommendation because of hyponatremia that is increasingly common with thiazides, particularly in women after the age of 80 years, and, as Tomasik et al.¹ mention, in those concomitantly treated with other drugs such as selective serotonin reuptake inhibitors, COX-2 inhibitors, and others.

Tomasik et al.¹ also state that "ACEIs were more effective than ARBs in reducing cardiovascular and cerebrovascular morbidity and mortality". This is based on a rather weak study in Chinese patients, in which patients on ARBs had a higher history of renal dysfunction, diabetes, and stroke at baseline. Admittedly, this may be the only paper in the elderly but several meta-analyses have shown that ARBs seem to be more effective in reducing strokes than ACEIs are, and, vice versa, ACEIs seem to be more effective in reducing coronary heart disease than ARBs. A similar trend was seen in the ONTARGET trial. To my way of thinking, the jury is still out on the ACEI vs. ARB question.

The guidelines by Tomasik et al.¹ are also to be commended because they consider modified blood pressure targets for patients older than 80 years. They appropriately emphasize that being slightly overweight might be beneficial because it may help prevent the age frailty syndrome. In this context, the Joint National Committee 2013 will set the treatment goal for patients above the age of 60 years at 150/90 mmHg if there is no diabetes or kidney disease. Also, the term "elderly" was no longer deemed to be appropriate.

These simple clinical considerations make it clear that there is no single approach to treating hypertension in the elderly. Clearly, treatment needs to be individualized as these guidelines are teaching us, and there are a myriad of

concomitant conditions, comorbidities, and concomitant medications prone to affect the selection of antihypertensive therapy. This rule holds true for all antihypertensive therapy but becomes much more pertinent for the treatment of the geriatric hypertensive patient.

Guidelines are written to guide practicing physicians in making diagnostic and therapeutic decisions in collaboration with their patients. They, therefore, should be to the point, provide solid evidence, and be applicable in daily clinical care. Clearly, the accompanying thoughts of Tomasik et al.¹ not only meet but even exceed these criteria.

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