

What is the Best Treatment for Hypertension in Old Patients?

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According to data from questionnaire answered by 39% of physicians [1]. Based on these data, intensive education about the best treatment of hypertension in elders seems necessary. More than 50% of Americans between the ages of 65 and 75 years and more than 70% of those aged 75 years and older have hypertension [2]. In about 60% of these persons with hypertension, isolated systolic hypertension is the most prominent [3]. Hypertension is reported in 57% of men and 60% of women with a mean age of 80 years [4]. Systolic and diastolic hypertension and isolated systolic hypertension were present in 20% and 37% of these men and 21% and 39% of these women respectively [4]. Mendelsohn reported high incidence of hypertension in different races too [5].

The higher the systolic or diastolic blood pressure in older persons increases the morbidity and mortality from cardiovascular disease in this group [6]. Increased systolic blood pressure is a better predictor and a stronger risk factor than increased diastolic blood pressure for morbidity and mortality in older persons due to cardiovascular disease [7].

In the Cardiovascular Health Study it was concluded that systolic blood pressure >169 mm Hg increased the mortality rate 2.4 times [8]. Hypertension in elders is a major risk factor for some diseases such as new coronary events, stroke and for congestive heart failure (CHF) [9-11]. Based on a meta-analysis, antihypertensive treatment reduced the incidence of strokes by about 30% and of new coronary events by about 20% and CHF by 39% [12]. In the Elderly Program, in the Systolic Hypertension, step 1 drug include chlorthalidone, 12.5 mg-25 mg daily, and the step 2 drug, atenolol, 25 mg-50 mg daily, caused a 49% reduction in the development of CHF [13].

We agree that according to the Sixth Report of the Joint National Committee on Detection, Evaluation, and Treatment of Hypertension (JNC VI), the aim of the hypertension therapy in older persons is to reduce the blood pressure to <140/90 mm Hg. In patients with diastolic hypertension, diastolic blood pressure should be decreased to 80-85 mm Hg [14].

JNC VI recommends that diuretics or beta blockers should be used as initial treatment in patients with hypertension and no associated medical conditions [14]. But it should be mentioned that older persons with hypertension have a very high prevalence of associated medical conditions. The antihypertensive drugs administered to these persons should be selected depends on their associated medical conditions.

Beta blockers and Angiotensin-Converting Enzyme (ACE) inhibitors should be used in patients with prior myocardial infarction

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and these patients should not treat with calcium channel blockers or alpha blockers [15]. It is confirmed that in patients with prior myocardial infarction and hypertension treatment with beta blockers, ACE inhibitors, diuretics, calcium channel blockers, or alpha blockers, the incidence of new coronary events in persons treated with one antihypertensive drug was lowest in persons treated with beta blockers or ACE inhibitors [15]. In older persons treated with two antihypertensive drugs, the incidence of new coronary events was lowest in persons treated with beta blockers plus ACE inhibitors [15].

Several studies confirmed the role of beta blockers in decreasing coronary events in patients with prior myocardial infarction is especially increased in persons with Diabetes Mellitus (DM) [16], abnormal Left Ventricular Ejection Fraction (LVEF) [17], and with CHF with abnormal LVEF or normal LVEF [18]. As a treatment in older persons with hypertension who have angina pectoris, myocardial ischemia, atrial fibrillation with a rapid ventricular rate, hyperthyroidism, preoperative hypertension, migraine, or essential tremor, beta blockers should also be used [19,20]. The hypertensive drug should be begin at the lowest dose and increased to the maximum dose. If there was no response to the initial drug, after reaching the full dose of drug, a second drug from another class should be started. In the case of significant adverse effects, a drug from another class should be substituted.

A diuretic is an initial drug routinely, but if it is not the initial drug, it is usually used as the second drug. A third drug from another class should be added, if the antihypertensive response was insufficient after reaching the full dose of two classes of drugs. In addition to appropriate treatment, in patients with hypertension cigarette smoking must be stopped. Diet and exercise should be used to reduce weight in overweight persons. According to Adler et al. study, each

10 mm Hg reduction in mean systolic blood pressure is associated with a significant 11% reduction in myocardial infarction risk. It seems vital to treat hyperlipidemia in old patients with hypertension [21].

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