

Editorial

Hypertension in Geriatric Population

Abdullah Al Shafi Majumder

President, Bangladesh Society of Geriatric Cardiology

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It will not be an exaggeration if I state that hypertension is the disease of geriatric population. But unfortunately the topic does not draw attention in the scientific discussions as it deserves. In most trials on hypertension the elderly population is underrepresented, so we have limited data. The prevalence of hypertension increases with age, with a prevalence of 60% over the age of 60 years and 75% over the age of 75 years. Older is defined as 65 years and the very old as 80 years in geriatric population.¹ As our population is aging – like the other parts of the world, it is imperative to give more focus on the hypertension in the elderly people. Identifying the condition is not difficult but the peculiarities of high blood pressure in this particular age group needs special attention which is not infrequently overlooked by the physicians. As our aged population is going to be increased in number in the coming days, we should be aware of the challenges of the dealing with hypertension in the geriatric group.

Cut off value of blood pressure to label “hypertensive” in an elderly is >130/80 mmHg by the ACC guideline² and ESC guideline sets it as >140/90 mmHg.¹

One of the peculiarities, every physician recognizes, is the presence of isolated systolic hypertension in the geriatric population. There is simple explanation that with ageing there is arteriosclerosis of the arteries that lead to rise of SBP with normal DBP. Whether or not ISH, in most cases there is wide pulse pressure. Pseudo-hypertension results from the arteriosclerosis of the arteries where the central aortic remains within normal.^{3,4}

Orthostatic hypotension- defined by >20 mmHg decrease in SBP or >10mmHg decrease in DBP on

standing within 5 minutes – is more common in elderly patients than the younger patients. This is manifested by dizziness on standing or instability and in more serious situations there may be black out. This may be explained by the autonomic dysregulation. In a study it is found that use of beta-blockers tend to be associated more this event than the use of other drugs. In addition, fluid depletion and electrolyte disturbances – that is more common in the aged people – may be responsible. Diuretics – if not judiciously used – may also cause fluid loss and hyponatremia and hypokalemia.³⁻⁵ Post-prandial hypotension, described by some authors in elder people, is decrease of SBP following meal.³

Ambulatory blood pressure monitoring is an important tool to assess the characteristics of blood pressure. This is more true in the geriatric population.^{1-3,5}

Considering the co-morbid conditions is pivotal in the effective and safe management of hypertension in the elderly. Common co-morbidities that are expected are diabetes mellitus, ischaemic heart diseases, renal impairment, respiratory diseases, cognitive disorders, arthritis etc. Management of hypertension needs to be inclusive in the total care of the patients. This is the situation where the idea of personalized medicine needs to be applied. A number of patients are taking NSAIDs and steroids chronically. These patients need special care as many of them will be treated as “resistant hypertensive”.^{3,5-7}

Age alone must never be a barrier to treatment because high BP is an important risk factor even at the most advanced ages. From the HYVET study,⁸ we learnt that lowering of blood pressure in very elderly, age > 80 years. resulted in

Address of Correspondence: Abdullah Al Shafi Majumder, President, Bangladesh Society of Geriatric Cardiology

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significant reduction in stroke 30%; heart failure (64%) and mortality (21%). A recent study of a cohort of older patients from the general population (thus including those with frailty) has shown that better adherence to anti-hypertensive treatment was associated with a reduced risk of CV events and mortality, even when age was >85 years (mean 90 years).^{3,9} From the STEP study,¹⁰ (8511 enrolled : 4243 /4268 intensive vs standard-treatment with 1 year follow-up) , it has been concluded intensive treatment of SBP of target 130 mmHg to 110 mmHg led to lower cardiovascular events than standard treatment of target SBP 130 to 150 mmHg. . ACC guideline recommended initiation of anti-hypertensive drug therapy at BP >130/80 mm Hg with target of <130/80 mm Hg would be appropriate.^{2,5} Benefit of treatment is not limited to fit and independent older patients. It should be recognized that any amount of BP lowering is likely to be worthwhile and associated with a reduced risk of major CV events (especially stroke and heart failure) and mortality.^{1,3}

Selection of the pharmacological agents need careful considerations.^{3,5} Diuretics – thiazide diuretics , like hydrochlorothiazide, chlorthalidone, bendrofluazide – may be the initial agents. Indapamide – a non-thiazide diuretic is also a favored agent. Newer beta-blockers are useful in the presence of coronary artery diseases, heart failure, arrhythmia, hyperthyroidism or senile tremor. Calcium channel blocker – both dihydropyridine and non-dihydropyridines – are good choice as they are effective in ischaemic heart diseases /supraventricular arrhythmia. RAAS inhibitors – ACEi /ARBs – are used in the elderly population which are indicated in the associated LV dysfunction or heart failure. Diuretics plus ACEi are recommended in elderly hypertensive with cerebrovascular diseases. The principle of use of drugs is to start with single agent with low dose and gradually titrate up the dose and if necessary add a second agent taking into account the target level of blood pressure and unless required for concomitant diseases, loop diuretics and alpha-blockers should be avoided because of their association with injurious falls. ESC guideline recommends SBP to be kept at 130–139 mmHg and BBP at <80 mmHg with the point that lowering of SBP < 130 mmHg is to be avoided.¹

Physicians need to be aware of the characteristics and challenges of hypertension in the geriatric

population as this group is increasing in the population. We have to clear the myths and follow the scientific evidence.

Conflict of Interest - None.

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