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**Letter to the Editor****Pharmacological management of hypertension in adults: updates from Eighth Joint National Committee**

Sir,

The choice of first-line antihypertensive drug(s) is a matter of intensive research despite the availability of data from large, randomized, and controlled clinical trials. The Eighth Joint National Committee (JNC) guideline on management of high blood pressure (BP) in adults has significant updates over the earlier guidelines.<sup>1</sup> Revisions in the target BP to be achieved are shown in Table 1.

From the pharmacotherapy perspective, beta-blockers (BB) are no longer among the first-line drugs. JNC 7 guidelines recommended the use of thiazide diuretics in most of the patients, either alone or in combination with angiotensin converting enzyme inhibitors (ACEI)/angiotensin receptor blockers (ARB), calcium channel blockers (CCB) or BB, except in the presence of compelling indications which dictate the use of others drugs first.<sup>2</sup> As per the current guidelines, the initial drugs recommended include thiazide-type diuretics, ACEI/ARBs and CCBs. Thiazide-type diuretics include hydrochlorothiazide, bendroflumethiazide, chlorthalidone, and indapamide. BB are not recommended for the initial treatment of hypertension due to a higher rate of the primary composite outcome of cardiovascular death, myocardial infarction, or stroke compared to use of an ARB, as reported in a study, a finding that was driven largely by an increase in stroke.<sup>3</sup> Other studies have shown similar efficacy or inconclusive results.

In the general black population, ACEI/ARBs are not recommended as the initial antihypertensive agents except in patients with chronic kidney disease, particularly if associated with proteinuria.<sup>1</sup>

It is to be noted that the guideline development process was a focused evidence review to address three specific questions regarding hypertension in adults:<sup>1</sup>

1. Does initiating antihypertensive pharmacologic therapy at specific BP thresholds improve health outcomes?
2. Does treatment with antihypertensive pharmacologic therapy to a specified BP goal lead to improvements in health outcomes?
3. Do various antihypertensive drugs or drug classes differ in comparative benefits and harms on specific health outcomes?

Different treatment strategies might have different cardiovascular, cerebrovascular or renal outcomes. However,

**Table 1: Blood pressure goals in adult hypertensive patients according to JNC 8.**

Age group	Target SBP* (mm Hg)	Target DBP* (mm Hg)
≥60 years	<150 <sup>a#</sup>	<90 <sup>a</sup>
30-59 years	<140 <sup>b</sup>	<90 <sup>a</sup>
18-29 years	<140 <sup>b</sup>	<90 <sup>b</sup>
≥18 years with chronic kidney disease, diabetes mellitus	<140 <sup>b</sup>	<90 <sup>b</sup>

\*SBP : Systolic blood pressure, DBP : Diastolic blood pressure, a : Strong recommendation, b : Based on expert opinion, # : Acceptable if treatment results in lower achieved SBP (e.g., <140 mm Hg) provided treatment is well tolerated and without adverse effects on health or quality of life (recommendation based on expert opinion)

based on the evidence review the guideline recommendations emphasize on attainment and maintenance of goal BP rather than on individual pharmacological agent used to achieve this. Considering the basic focus of the guidelines, it is important that the clinician takes into consideration the clinical characteristics and circumstances of each individual patient and provides adequate emphasis on non-pharmacological measures. Since the focus of the guidelines was to answer the above mentioned three questions no specific recommendations have been made with regard to management of hypertension with comorbidities. However, all the initial drugs recommended in the current guidelines are part of the recommended drugs for one or more of the compelling indications listed in the JNC 7.<sup>2</sup> While the clinician is the ultimate judge in selecting the drug(s) to be prescribed in an individual patient, it is to be remembered that the currently recommended drugs are backed by high quality evidence with regards to improvement in the final health outcomes.

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