Approach to antihypertensive drug therapy: Patients without indications for a specific drug (Inset 1)

Inset 1

Reasons to incorporate other agents earlier in the treatment regimen include:

- A thiazide-like diuretic is useful in patients with osteoporosis, edema, calcium nephrolithiasis with hypercalciuria.
- A beta blocker should generally be used initially in patients with a history of myocardial infarction.
- A mineralocorticoid receptor antagonist is appropriate in patients with HFpEF.
- Drugs such as ARNIs, beta blockers, and mineralocorticoid receptor antagoinists should be used initially in patients with HFrEF.

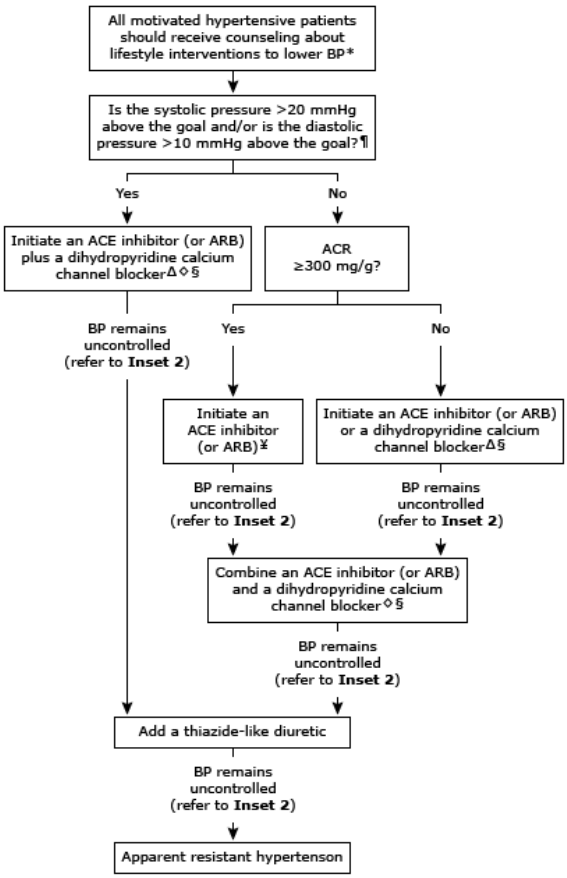
Inset 2

BP control should be reassessed approximately 2 to 4 weeks after initiation or titration of therapy.‡ 1 or 2 titration steps are appropriate before modifying or adding medication (because titrating drugs to their maximum dose increases the risk of adverse effects while providing diminishing benefits on BP control).

The most common causes of lack of response to antihypertensive drug therapy are:

1. Medication nonadherence
2. White coat effect
3. Improper BP measurement

Thus, when drug therapy interventions appear to be ineffective, the clinician should consider nonadherence and ensure that BP is evaluated properly.



ACE: angiotensin-converting enzyme; ACR: albumin-to-creatinine ratio; ARB: angiotensin receptor blocker; ARNI: angiotensin receptor-neprilysin inhibitor; BP: blood pressure; CKD: chronic kidney disease; ESKD: end-stage kidney disease; HFpEF: heart failure with preserved ejection fraction; HFrEF: heart failure with reduced ejection fraction.

* In patients with stage 1 hypertension (ie, BP 130 to 139/80 to 89 mmHg) and elevated cardiovascular risk, attaining the goal BP with lifestyle interventions alone can be attempted for a period of 3 to 6 months. Drug therapy should be initiated in such patients if lifestyle interventions are not sufficient to achieve the BP goal.

¶ Some experts and consensus recommendations suggest that initial drug therapy should include 2 drugs (ie, combination therapy) if the systolic pressure is >20 mmHg above goal or the diastolic pressure is >10 mmHg above goal. However, other experts and consensus guidelines suggest that initial combination therapy be used in patients whose systolic pressure is >10 mmHg above the goal. Both approaches are reasonable.

Δ Dihydropyridine calcium channel blockers include drugs such as amlodipine, felodipine, extended-release nifedipine, nitrendipine, and levamlodipine.

◇ Using single-pill combinations (rather than prescribing 2 separate pills) is preferred because this can improve adherence and control.

§ Use of a thiazide-like diuretic (ie, chlorthalidone, indapamide) is a reasonable alternative for monotherapy or in combination with an ACE inhibitor or ARB (instead of using a dihydropyridine calcium channel blocker). In addition, a thiazide-like diuretic is preferred in certain patients (refer to inset 1). Thiazide-like diuretics (ie, chlorthalidone and indapamide) are more potent than thiazide-type diuretics (eg, hydrochlorothiazide). In addition, thiazide-like diuretics, but not thiazide-type diuretics, have been shown to reduce cardiovascular outcomes.

¥ ACE inhibitors or ARBs can prevent progression of CKD and reduce the risk of ESKD among patients with ACR ≥300 mg/g.

‡ Patients with severe asymptomatic hypertension (eg, blood pressure ≥180 mmHg systolic and/or ≥110 mmHg diastolic with no symptoms or signs of acute end-organ damage) should be evaluated for medication titration within 1 week.

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