



PIC QUESTION OF THE WEEK: 6/07/10

Q: Please define *resistant* hypertension and provide its recommended treatment options?

A: The 2003 Joint National Committee Report (JNC 7) defines *resistant* hypertension (*RH*) as “the failure to reach goal blood pressure in patients who are adhering to full doses of an appropriate 3-drug regimen that includes a diuretic.” Patients suspected of having RH should be evaluated for pseudoresistance and contributing factors as well as drug-related and secondary causes. Pseudoresistance can result from improper measurement techniques such as wrong cuff size, smoking prior to measurement, poor drug compliance, the white-coat effect, and inadequate therapy. Compliance can be improved by using lower-cost agents and other measures such as combined dosage forms and once-daily dosing. Ambulatory measurements and home readings can be used to identify the white-coat effect. Inadequate treatment is most often associated with lack of concomitant diuretic therapy. Contributing factors in RH that must be corrected include excessive dietary sodium, heavy alcohol consumption, and obesity. Simultaneous use of NSAIDs, sympathomimetics, stimulants, corticosteroids and a variety of other drugs can increase blood pressure. If possible, these agents should be discontinued in cases of suspected RH and the patient subsequently re-evaluated. Primary aldosteronism is the most frequent secondary cause of RH. Patients should be screened and specifically treated for this condition. Other secondary causes include chronic kidney disease, renal artery stenosis, obstructive sleep apnea, pheochromocytoma, and Cushing’s syndrome. Therapy of RH involves recognizing and managing the factors listed above and implementing treatment that includes multiple classes of drugs. If possible, patients should be referred to a hypertension specialist. The most effective antihypertensive therapy consists of a three-drug regimen that includes an angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB), a dihydropyridine calcium channel blocker, and a long-acting diuretic (chlorthalidone is preferred over HCTZ). At least one medication should be administered at bedtime. Patients who do not completely respond to this type of regimen may benefit by addition of an aldosterone antagonist such as spironolactone. Combination α - β blockers such as labetalol may be considered when the above measures have been inadequate. RH affects a small percentage of the hypertensive population, but must be correctly diagnosed before effective therapy can be initiated.

References

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