New guidelines issued for treating resistant hypertension

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For the first time, the American Heart Association has issued guidelines to help patients and healthcare providers tackle resistant high blood pressure that seems to defy treatment.

The guidelines are published online in Hypertension: *Journal of the American Heart Association*. This is the first consensus statement to define resistant hypertension and recommend an approach for evaluation and treatment. Hypertension is called resistant if a person's blood pressure remains above goal despite their taking three medications to lower it. High blood pressure that is under control, but requires four or more medications to treat it is also considered resistant to treatment.

"Patients need to recognize the importance of blood pressure control and that in most cases they will need a combined approach of lifestyle changes and medication for effective treatment," said David A. Calhoun, M.D., chair of the guideline writing committee.

"Doctors must recognize that resistant hypertension requires special consideration in terms of evaluation and treatment." Diuretics are often underused in people with resistant hypertension, and some patients may benefit from adding mineralocorticoid receptor antagonists (MRAs) to their treatment regimens, according to the statement. MRAs treat a condition called primary aldosteronism, which is found in about 20 percent of patients with resistant hypertension.

"The benefit of mineralocorticoid receptor antagonists in treating

resistant hypertension has only been recently confirmed," said Calhoun, a professor of medicine in the Vascular Biology and Hypertension Program at the University of Alabama at Birmingham.

"Hypertension specialists are likely using them to a greater degree, but they are probably not being broadly used to address this problem. Using MRA's requires special biochemical monitoring, particularly to measure blood levels of potassium due to the risk of hyperkalemia (a condition caused by abnormally high potassium levels in the blood)."

The scope of resistant hypertension has not been quantified, but clinical trials suggest it may affect up to 30 percent of people with high blood pressure. "Older age and obesity are two of the strongest risk factors associated with resistant hypertension. The condition will likely become even more common as the population ages and becomes heavier," the committee wrote.

People with resistant hypertension have a high cardiovascular risk and often multiple health conditions that complicate their blood pressure management.

It's important to determine that a person's condition truly is resistant, said the committee, which wrote: "Uncontrolled hypertension is not the same as resistant hypertension. Uncontrolled blood pressure can be caused by poor medication adherence and/or an inadequate treatment regimen." Confirming resistance is the first step in evaluating difficult-to-treat high blood pressure. Successful treatment of resistant hypertension requires consideration of lifestyle factors that contribute to treatment resistance, diagnosing and treating secondary causes of high blood pressure and using multiple-drug treatments effectively, the committee said.

Lifestyle factors

Weight: Obesity is associated with more severe high blood pressure, and the need for multiple medications to control blood pressure. Thus, obesity is a common feature of resistant hypertension. Weight loss, although not specifically evaluated in patients with resistant hypertension, has clear benefits in reducing blood pressure and the number of medications required to control blood pressure. Sodium: High dietary salt intake is common in patients with resistant hypertension and more pronounced in typical salt-sensitive patients including the elderly, African Americans, and in particular, patients with chronic kidney disease. In patients with general high blood pressure, reducing dietary salt intake can reduce systolic and diastolic blood pressure by 5–10 and 2–6 millmeters of mercury (mm Hg), respectively. African-American and elderly patients tend to show greater benefits from reducing salt intake.

Alcohol: Heavy alcohol intake is associated with higher blood pressure and with treatment-resistant blood pressure. In one study, a small group of patients who quit heavy alcohol drinking reduced 24-hour ambulatory systolic blood pressure by 7.2 mm Hg and diastolic blood pressure by 6.6 mm Hg while dropping the prevalence of hypertension from 42 percent to 12 percent.

Secondary Causes of Hypertension

Patients with resistant hypertension often have potentially reversible causes of hypertension contributing to their treatment resistance. Obstructive sleep apnea, renal parenchymal disease, primary aldosteronism and renal artery stenosis are often present in people with resistant hypertension. Treating these disorders, which may include referral to a specialist, can improve blood pressure control.

Medications

Withdraw interfering drugs: Drugs that increase blood pressure, such as non-steroidal anti-inflammatory drugs (NSAIDs) like aspirin, should be withdrawn or reduced, if possible. An effective multi-drug regimen to reduce blood pressure is essential. Diuretics: Reports from hypertension specialty clinics indicate that treatment resistance is often in part related to lack of or underuse of diuretics.

Mineralocorticoid receptor antagonist: An MRA can provide significant antihypertensive benefit when added to existing multi-drug regimens. In a small study of patients taking an average of four anti-hypertensive medications, adding a MRA lowered blood pressure on average by an additional 25 mm Hg systolic and 12 mm Hg diastolic.

Multi-drug regimens: “It seems most appropriate to continue to combine agents of different mechanisms of action,” the group wrote. “Thus, a triple drug regimen of an ACE inhibitor or angiotensin receptor blocker, calcium channel blocker and a thiazide diuretic is effective and generally well-tolerated.” Ultimately, however, combinations of three or more drugs must be tailored to the individual, considering prior benefit, history of adverse events, additional medical conditions such as chronic kidney disease or diabetes, and patient financial limitations.

Dose timing: Studies have shown that patients taking at least one of their anti-hypertensive medicines at bedtime had better blood pressure control—in particular, lower nighttime blood pressure.

Adherence: Steps should be taken to help patients take medications regularly and properly. Prescriptions should be simplified as much as possible by using long-acting combination drugs and once-daily dosing. More frequent clinic visits and home blood pressure monitoring will generally help patients adhere to their treatment routine. And, while an expensive and labor-intense option, a team approach to treatment including nurse case managers, pharmacists and nutritionists can

improve treatment results.

Source: American Heart Association