



5 Top Tips for Managing Resistant Hypertension

1. Compliance, compliance, compliance. Inquire in a non-judgemental manner regarding frequency of missed medications and barriers to timely administration. Consider use of blister packs, combination pills, and medications with long half-lives that are dosed daily. Review proper home BP measurement technique, using validated and calibrated machines, and encourage recording results twice daily in a log for joint review. Reinforce salt restriction, especially in those with a history of excessive intake, fluid retention, or salt-sensitive hypertension.

2. Prescribe long-acting medications with synergistic activity. By definition, patients with resistant hypertension are compliant with 3 antihypertensive medications at optimal dose, one of which includes a diuretic.¹ Our practice is to combine long-acting RAAS inhibitors and calcium channel blockers, such as telmisartan with amlodipine, once daily. Patients with clinical features or a history of volume overload often warrant addition of a long-acting diuretic, such as chlorthalidone or indapamide. We typically refrain from using short-acting vasodilators such as hydralazine unless necessary for refractory hypertension or if otherwise indicated.

3. Rule out Obstructive Sleep Apnea (OSA). Obstructive sleep apnea is highly associated with resistant hypertension as well as primary aldosteronism. Despite this, studies examining the effects of CPAP use on blood pressure control have shown variable results. A common clue to underlying OSA on 24hr Ambulatory Blood Pressure Monitoring (ABPM) is non-dipping or reverse dipping, with elevated nocturnal blood pressures compared to daytime readings.²

4. Assess for secondary culprits. As guided by symptoms and clinical phenotype, consider screening for secondary culprits including: primary aldosteronism with morning serum renin and aldosterone levels, Cushing's syndrome with 24hr urinary cortisol or a low-dose dexamethasone suppression test, renovascular hypertension with renal arterial dopplers or MR angiography, and catecholamine excess with 24-hour urinary catecholamines and metanephrines.

5. Consider using spironolactone or eplerenone. Mineralocorticoid receptor antagonists such as spironolactone or eplerenone can provide potent antihypertensive relief for patients with resistant hypertension. In the PATHWAY-2 Trial, patients with resistant hypertension were randomized in crossover fashion to spironolactone, placebo, doxazosin, and bisoprolol. Of these options, spironolactone provided the most significant reduction in systolic BP, with an average decrease of 12.8mmHg (11.8 - 13.8mmHg).³ We often use eplerenone in men, as it is more selective to the mineralocorticoid receptor with reduced anti-androgen side-effects such as gynecomastia. Eplerenone has approximately 50% of the effect of spironolactone and has a shorter half-life, with twice daily dosing often needed for equivalent antihypertensive effect.

Liam Finlay, MBChB, FRCPC, CHS
Director, Toronto Hypertension Clinic
www.torontohypertensionclinic.ca

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