Screening for primary aldosteronism in primary care

Lisa Dubrofsky MDCM, Gregory L. Hundemer MD MPH

■ Cite as: *CMAJ* 2023 March 20:195:E410. doi: 10.1503/cmaj.221466

1 Primary aldosteronism (PA) is common among patients with hypokalemia and hypertension

Although most patients with PA are normokalemic, hypokalemia (either spontaneous or diuretic induced) in a patient with hypertension should prompt testing for PA. About 30% of patients with hypokalemia and hypertension seen in primary care have PA,[1] yet less than 5% of patients with hypertension and recurrent hypokalemia were screened in a Canadian setting.[2]

2 Patients with PA are at an increased risk of chronic disease if undiagnosed or untreated

The prevalence of PA in patients with hypertension in primary care is at least 4%–6%,[1,3] and potentially higher depending on the screening thresholds used.[4] If undiagnosed and not managed with targeted medical therapy or surgery, patients with PA are at a disproportionately higher risk of cardiometabolic disease than matched controls with essential hypertension.[4] Early diagnosis and targeted treatment are necessary to prevent the detrimental effects of hyperaldosteronism.[3]

3 Expert consensus recommends screening for PA in high-risk populations

Patients with severe or resistant hypertension, or patients with hypertension combined with other specific factors (hypokalemia, adrenal nodule or family history of PA), should be screened for PA with the aldosterone-to-renin ratio.[4,5]

4 Most antihypertensive medications can be continued during the work-up for PA

Stopping antihypertensive medications during PA screening may not be feasible. Apart from mineralocorticoid receptor antagonists (spironolactone, eplerenone) and amiloride, most other antihypertensive medications can typically be continued. A suppressed renin in the context of an angiotensin-converting enzyme inhibitor or angiotensin II receptor blockers is highly suspicious for PA.[4]

5 An elevated aldosterone-to-renin ratio is suggestive of PA

In suspected cases of PA, referral to a hypertension or endocrine specialist is warranted for further investigations, including work-up for unilateral disease that may be curable with surgery. Otherwise, empiric treatment with a mineralocorticoid receptor antagonist is recommended.[4]

References

1. Monticone S, Burrello J, Tizzani D, et al. Prevalence and clinical manifestations of primary aldosteronism encountered in primary care practice. *J Am Coll Cardiol* 2017;69:1811-20.
2. Hundemer GL, Imsirovic H, Vaidya A, et al. Screening rates for primary aldosteronism among individuals with hypertension plus hypokalemia: a population-based retrospective cohort study. *Hypertension* 2022;79:178-86.
3. Xu Z, Yang J, Hu J, et al.; Chongqing Primary Aldosteronism Study (CONPASS) Group. Primary aldosteronism in patients in China with recently detected hypertension. *J Am Coll Cardiol* 2020;75:1913-22.
4. Vaidya A, Hundemer GL, Nanba K, et al. Primary aldosteronism: state-of-the-art review. *Am J Hypertens* 2022;35:967-88.
5. Funder JW, Carey RM, Mantero F, et al. The management of primary aldosteronism: case detection, diagnosis, and treatment: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 2016;101:1889-916.

Competing interests: Gregory Hundemer received grants from the Canadian Institutes of Health Research and the Kidney Foundation of Canada. He was appointed as the first Lorna Jocelyn Wood chair for kidney research at The Ottawa Hospital. No other competing interests were declared.

This article has been peer reviewed.

Affiliations: Division of Nephrology (Dubrofsky), Department of Medicine, Women's College Hospital, Faculty of Medicine, University of Toronto, Toronto, Ont.; Division of Nephrology (Hundemer), Department of Medicine, and Ottawa Hospital Research Institute (Hundemer), University of Ottawa, Ottawa, Ont.

Correspondence to: Lisa Dubrofsky, Lisa.dubrofsky@wchospital.ca

