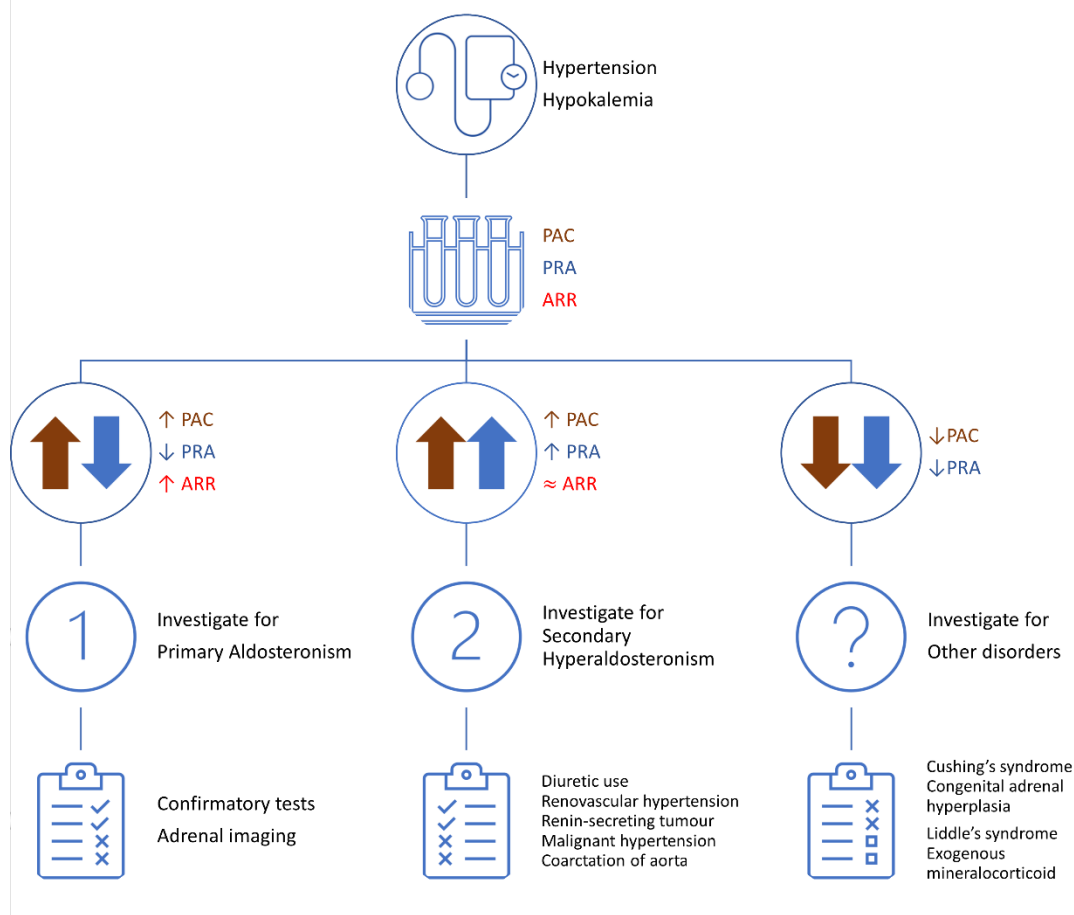


Appendix



Supplementary figure 1: Diagnostic algorithm for the investigation of hypertension associated with spontaneous or diuretic-induced hypokalaemia. Screening for primary aldosteronism by measurement of plasma aldosterone concentration (PAC), plasma renin activity (PRA) and aldosterone-renin ratio (ARR) is also recommended in persons with sustained blood pressure above 150/100 mmHg on three measurements on different days; hypertension resistant to three conventional antihypertensive drugs (including a diuretic) or controlled on four or more agents; hypertension associated with an adrenal incidentaloma; hypertension and a family history of hypertension or cerebrovascular accident at a young age (< 40 years); hypertension and sleep apnoea; and hypertension in first-degree relatives of patients with primary aldosteronism (Funder et al., 2016).¹ Where not possible to measure both aldosterone and renin for technical reasons or cost, screening with renin would be preferable to distinguish primary from secondary hyperaldosteronism. Ensure that serum potassium is replete (with supplements if necessary) at the time of testing as uncorrected hypokalaemia can cause false negatives by influencing aldosterone levels. Dietary salt restriction, concomitant malignant hypertension, pregnancy, and treatment with diuretics (including spironolactone), dihydropyridine calcium channel blockers, angiotensin converting enzyme inhibitors and angiotensin receptor blockers can produce false negatives by stimulating renin. Beta-blockers, alpha-methyl dopa, clonidine, and nonsteroidal anti-inflammatory drugs suppress renin, potentially causing false positives.

Reference

1. Funder JW, Carey RM, Mantero F, Murad MH, Reincke M, Shibata H, et al. The Management of Primary Aldosteronism: Case Detection, Diagnosis, and Treatment: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab.* 2016;101(5):1889-916.