Plasma aldosterone levels in patients with resistant hypertension

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Aim: The usual pattern of treated hypertension is high renin and low plasma aldosterone. We considered that aldosterone levels in the upper normal range in patients with resistant hypertension could be a clue for primary hyperaldosteronism.

Methods: 104 hypertensive patients on minimum 3 antihypertensive drugs, with/out type 2 diabetes mellitus (DM), were tested for plasma aldosterone levels. Diet, medication and comorbidities were recorded.

Results: Study group consisted in 53 males and 51 females, median age 49 +/- 7 years. 36 patients associated type 2 DM. Patients were treated with angiotensin converting enzyme inhibitors, angiotensin receptor blockers, calcium channel blockers, alpha methyl dopa and indapamid or small amounts of hydrochlorothiazide in various combinations. No hypokalemia was noted. 14 patients (13.4%) had plasma aldosterone level above 24 ng/dl, being in the upper tertile of normal reference values (2.21–35.3 ng/dl). 4 out of 36 diabetics and 1 out of 9 patients with clinical hypothyroidism classified in this upper tertile.

Conclusions: Though in our laboratory plasma aldosterone levels between 24 and 35.3 ng/dl are considered normal, we appreciated that in the clinical setting of treated hypertension, in the absence of potassium wasting diuretics and on mild sodium restriction diet, values in the upper third of normal range are elevated and could reveal primary hyperaldosteronism. All subjects will be exposed to a therapeutic trial of spironolactone 50 mg.