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Re-Evaluating Absent Clinical Success After Adrenalectomy in Unilateral Primary Aldosteronism

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Introduction: Adrenalectomy cures unilateral primary aldosteronism (PA), and improves or cures hypertension. However, a significant proportion of patients are classified with absent clinical success post-surgery, suggesting that surgery was ineffective. **Methods:** We assessed all patients 6–12 months after unilateral adrenalectomy for clinical outcomes using Primary Aldosteronism Surgical Outcomes (PASO), AVIS-2 and CONNsortium criteria. We estimated blood pressure (BP) changes after adjustment for changes in defined daily dosages (DDD) of antihypertensive medications. Finally, patients were reassessed using PASO at their most recent clinical visit. **Results:** 104 patients with unilateral PA underwent adrenalectomy at two tertiary centres from 2000–2019. 24 (23%), 31(30%) and 54 (52%) patients were classified with absent clinical success using PASO, AVIS-2 and CONNsortium criteria respectively. Amongst 24 patients with absent clinical success using PASO criteria, 10 had complete biochemical cure, 3 partial, 2 absent, and 9 had resolution of hypokalemia. On multivariate analysis, absent clinical success was associated with presence of hyperlipidemia, diabetes mellitus and lower DDD at baseline. After adjustment for changes in DDD, 7 of 24 patients showed BP improvement ≥20/10mmHg. After follow-up of mean 5.6 years, 12 of 24 patients showed partial or complete clinical success when reassessed using PASO criteria. Only 6 of 104 (5.8%) patients failed to show any clinical improvement after surgery. **Conclusions:** Although some patients may be classified with absent clinical success post-surgery, majority demonstrate evidence of clinical benefit. Unilateral adrenalectomy remains the recommended treatment option for patients with unilateral PA.

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Serum Soluble (Pro)renin Receptor Level as a Prognostic Factor in Patients Undergoing Maintenance Hemodialysis

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Background: The (pro)renin receptor [(P)RR)] is a multifunctional protein with roles in angiotensin II-dependent and -independent intracellular cell signaling and as an adaptor protein between the Wnt receptor complex and vacuolar proton-translocating adenosine triphosphatase. The (P)RR is cleaved to generate soluble (P)RR [s(P)RR], reflecting the status of the tissue renin-angiotensin system and/or activity of the (P)RR. Patients undergoing hemodialysis (HD) have poor prognosis because of the increased prevalence of cardiovascular and malignant diseases. This study was conducted to investigate whether the s(P)RR level is associated with new onset of cardiovascular events or malignant diseases and prognosis in patients undergoing HD. **Methods:** A total of 258 patients undergoing maintenance HD who were enrolled in our cohort study investigating the relationships between serum s(P)RR levels and background factors were prospectively followed up for 60 months. We investigated the relationships between s(P)RR levels and new onset of cardiovascular events or malignant diseases and mortality during the follow-up period. **Results:** The cumulative incidence of new onset of cardiovascular events (P = 0.009) and cardiovascular deaths (P < 0.001), but not of malignant diseases, was significantly greater in patients with higher serum s(P)RR level (≥ 29.8 ng/ml) than in those with lower s(P)RR level (< 29.8 ng/ml). A high serum s(P)RR level was independently correlated with cardiovascular mortality (P = 0.046). **Conclusions:** These data showed that the serum s(P)RR level is associated with cardiovascular events and mortality, suggesting that the serum s(P)RR level could be used as a biomarker for selecting patients requiring intensive care.

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Stable Serum Potassium After Intracerebral Hemorrhage Is Predictive of Primary Aldosteronism

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Background: Primary aldosteronism (PA) is a well-known risk factor for cardiovascular complications including intracerebral hemorrhage (ICH). Still, there seem to be many PA patients who have been missing the opportunities for the diagnosis of PA even after stroke. PA screening tests in all stroke patients are, however, inefficient. Here we focused on ICH, where hypertension has a great contribution, and searched for the indications of performing PA screening tests in ICH patients. **Methods:** 1) Out of 181 ICH patients admitted to our hospital between June 2016 and February 2017, 126 patients of hypertensive ICH were enrolled in this study. Plasma aldosterone concentration (PAC), plasma renin activity (PRA) and other hormones were measured in the morning two days after admission. 2) 1,242 hypertensive ICH patients admitted to our hospital after January 2013 were retrospectively reviewed **Results:** 1) After excluding those who had been taking medications which could intervene with PAC or PRA on admission, nine patients were positive for PA screening (PAC/PRA ratio >200 and PAC >120 pg/mL) and 46 were negative. Age (68.6 vs 67.1 y), sex (male 66.7 vs 67.3 %) and blood pressure (172/97 vs 177/100 mmHg) were similar between these two groups. Serum potassium was slightly lower in positive group on admission (3.6 vs 3.9 mmol/L; P=0.108), and the difference became more evident two days later (3.7