

Renal impairment is an independent predictor of residual hypertension in aldosterone producing adenoma patients after surgery – The TAIPAI study

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Summary

Context: Autonomous elevated aldosterone will increased glomerular filtration rate and renal damage in patients with primary aldosteronism (PA), but the clinical evidence of the contribution of early renal impairment on post-adrenalectomy residual hypertension is limited.

Objectives: To determine the effect of early renal impairment on post-adrenalectomy cardiovascular disease and residual hypertension in patients with aldosterone producing adenoma (APA).

Design, Setting, and Patients: Observative cohort study for based on the TAIPAI database.

Main Outcome Measures: From July 1999 to January 2007, 150 patients (61 male, 89 female, 47.2 ± 11.6 years old) diagnosed with APA had undergone surgical intervention in National Taiwan University Hospital. The variables responsible for post-operative residual hypertension were evaluated. Renal function was categorized as impairment if creatinine clearance (CrCl) $< 90 \text{ mL/min/1.73 m}^2$.

Results: Ninety- nine (66%) patients had renal impairment before operation. Over a mean 58.7 months follow-up after adrenalectomy, the incidence rate of cardiovascular disease was 8.2% person-year, 55 (36.6%) patients still had post-operative residual hypertension. The independent risk factors for post-operative residual hypertension were a longer duration of hypertension before operation ($p = 0.001$), higher pre-operative body mass index ($p = 0.001$), and renal impairment ($p = 0.021$).

Conclusions: Nearly two-third of the APA patients were cured of hypertension after adrenalectomy. Renal impairment, even with low normal CrCl, appeared to be associated with high incidence of cardiovascular disease and post-operative residual hypertension.