Diagnosis Value of the Post –Losartan test *v.s.* Post- Capotopril Test in Primary Aldosteronism

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ABSTRACT

Background: The ARR change induced by angiotensin II receptor blockers (ARB) was reported to be higher than that by ACE inhibitor in all kinds of hypertensive patients. Therefore, this trial assessed whether ARB offers any additional advantage in the confirming diagnosis of PA.

Design: Prospective, cohort, head to head study

Methods: From July 2003 to July 2006, 135 patients received captopril and losartan test for the conforming diagnosis of PA in TAIPAI intervention. An ARR>35 with PAC> 10 ng/dL after administration of captopril or losartan was defined as a positive test.

Results; Seventy- one patients (40 women, aged 48.8 ± 1.2 years) had the diagnosis of PA. The area under the curve (AUC) of post-CAP PAC (0.744) was significant inferior than that of post-LOS PAC (0.744 vs 0.829, p= 0.038). The specificity was 89.1 vs 93.8 and sensitivity was 70.4 vs 84.5 % of CAP and LOS test. The accuracy was 88.9%, the agreement was good (k= 0.778) and did not show disagreement in McNemar test (p= 0.118) with losartan test. The Bland-Altman plot also displays a randomly scattered with a significant bias of -23.5% with PAC between post CAP and LSA tests. Using post-LOS >60 as the cut-off value, we obtained a positive predictive value of 82% and a negative predictive value of 57% to separate APA from IHA

patients.

Conclusion: Both captopril and losartan test have good specificity and accuracy in exclusion PA from essential hypertension. The superiority of the post-losartan ARR as a test for screening, diagnosis of PA is reinforced by our result. Clarified post-captopirl ARR > 60, APA could be adequate differentiated from IHA.