

Losartan Effect on lowering TNF- α Serum Levels in Asymptomatic Hyperuricemia Hypertension Patients

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Submission date: 03-Jun-2021 08:07AM (UTC+0700)

Submission ID: 1599340775

File name: m_Levels_in_Asymptomatic_Hyperuricemia_Hypertension_Patients.pdf (106.09K)

Word count: 1367

Character count: 7961

PREVALENCE AND CLINICAL CORRELATES OF SOMATIC MUTATION IN ALDOSTERONE PRODUCING ADENOMA-TAIWANESE POPULATION

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Primary aldosteronism (PA) is a common form of secondary hypertension and has significant cardiovascular consequences. Mutated channelopathy due to activation of calcium channels has recently been described in aldosterone-producing adenoma (APA).

The aim of this study was to investigate the prevalence of somatic mutations in these key genes in unselected patients and their clinical and cardio-metabolic parameters and molecular correlates.

The study involved 148 consecutive PA patients, (66 males; aged 56.3 ± 12.3 years) identified by modified four corners rules who received adrenalectomy, collected from the Taiwan PA investigator (TAIPAI) group.

A high rate of somatic mutation in APA was found ($n=91$, 61.5%); including mutations in *KCNJ5* ($n=88$, 59.5%), *ATP1A1* ($n=2$, 1.4%), and *ATP2B3* ($n=1$, 0.7%); however, no mutations in *CACNA1D* were identified. Mutation-carriers were younger (<0.001), had lower Cyst C ($p=0.042$), pulse wave velocity ($p=0.027$), C-reactive protein ($p=0.042$) and a lower rate of proteinuria ($p=0.031$) than non-carriers. After multivariate adjustment, mutation carriers had lower serum CRP levels than non-carriers. Patients with mutation also had a greater chance of recovery from hypertension after operation ($p=0.005$).

A high incidence of somatic mutations in APA was identified in Taiwanese population. Mutation-carriers had lower CRP levels and a higher rate of cure of hypertension after adrenalectomy. This raises the possibility of using mutation screening as a tool in predicting long term outcome after adrenalectomy.

Keywords: adrenalectomy; CRP; Primary aldosteronism; residual hypertension; somatic mutation

LAPARO-ENDOSCOPIC SINGLE-SITE (LESS) ADRENALECTOMY IN PATIENTS WITH PRIMARY HYPERALDOSTERONISM: A PROSPECTIVE STUDY WITH LONG-TERM FOLLOW-UP

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Purpose: Laparoscopic single-site (LESS) adrenalectomy is a promising minimally invasive technique, however, the current evidence has not confirmed its long-term effectiveness in primary aldosteronism (PA). We conducted a study to analyze the long-term efficacy of LESS adrenalectomy in patients with PA.

Material and Methods: A total of 49 patients who had been clinically confirmed with PA who had an indication for unilateral adrenalectomy were included in this study. Perioperative data were obtained for all patients. Blood pressure and the levels of serum aldosterone, renin, and potassium were checked periodically. The median follow-up was 16.5 months.

Results: No intra- or early post-operative complication occurred. All LESS adrenalectomies were completed successfully, except one with laparoscopic conversion. Hypokalemia was resolved in all cases and no patient required potassium supplements after surgery. Post-operative cure of hypertension was achieved in 63% of our patients. Overall, 84% of our PA patients had clinical improvement in blood pressure control after surgery.

Conclusions: Our long-term experience revealed that LESS adrenalectomy is a safe and effective approach, which demonstrated comparable long-term cure and improvement of hypertension to a conventional laparoscopic series in treating PA.

LOSARTAN EFFECT ON LOWERING TNF- α SERUM LEVELS IN ASYMPTOMATIC HYPERURICEMIA HYPERTENSION PATIENTS

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Hypertension has strong association with hyperuricemia. The serum uric acid levels were elevated in 25% untreated hypertensive subjects. 30% of hypertensive patients were hyperuricemic and gouty arthritis. Hypertension and hyperuricemia are two

conditions that might increase risk factor for CV events such as obesity, dyslipidemia, insulin resistances, metabolic syndrome. Hyperuricemia is a condition that can cause a systemic inflammation leading to endothelial dysfunction. TNF- α is one of marker systemic inflammation. The purpose of this study was to determine the effect of losartan on levels of TNF- α Serum in hypertensive patients with asymptomatic hyperuricemia disease

This was a before-after study design, conducted in Departement of Internal Medicine, Mohammad Hoesin Hospital (RSMH) Palembang began in March until August 2013. Subjects included were 30 patients (53,3% male). The effect of losartan on systolic and diastolic blood pressure were $146,00 \pm 4,98$ to $88,67 \pm 3,45$ mmHg and $126,67 \pm 7,39$ to $79,00 \pm 4,02$ mmHg respectively ($p=0,000$). The levels of serum TNF- α before and after administration of losartan were $9,39 \pm 1,05$ pg/ml and $3,29 \pm 2,26$ pg/ml and statistically significant different with $p<0,000$.

This study proved the effect of losartan on the decreased TNF- α Serum.

Keywords: hypertension; hyperuricemia; losartan; TNF- α

SALT INTAKE IN URBAN AND RURAL COMMUNITY IN JATINANGOR, SUMEDANG

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Background: Hypertension is a degenerative disease with devastating complications. One of the important factor to be controlled as both primary and secondary prevention is salt intake. According to Basic Health Research (*Riset Kesehatan Dasar- Riskesdas*) in 2007, salt intake in Indonesian was as high as 15 g/d compare to 4 g/d as recommended by WHO. This research is a preliminary research for the importance of salt restriction in Indonesian population. The aim of this research is determining the difference of salt intake in urban and rural area in Jatinangor, Sumedang.

Method: A cross-sectional study was conducted in 2 different area of Jatinangor, 163 minimum sample size was needed ($\alpha=10\%$, 2 ways; $\beta=10\%$), with multistage sampling methods. Demographic information was taken by questionnaire, anthropometric measurement was taken using standard protocol, blood pressure was taken by automatic digital manometer (validated elsewhere). Sodium intake was measured by spot urine sodium excretion, calculated by Tanaka formula.

Result: Samples and data from 182 subjects were collected. 61% of respondent are rural resident, 63% women, 38% with hypertension, 90% secreted more than 17 g sodium/day. Mean urinary sodium secretion are 48,89 (CI 90%, 13.15–45.6) and 78,27 (CI 90%, 11.54–47.22) g/day in urban and rural community respectively, the mean difference is 29,38 ($p=.000$). Mean urinary sodium secretion in non hypertensive compare to hypertensive patients are 69,88 (CI 90%, 10.5–26.03) and 62,12 (CI 90%, 9.85–25.37) g/day, respectively, the mean difference is 7,76 g ($p=0.386$).

Distribution of gender and residence are not equal due to the absence of the men, mostly in the urban area, who work in other city. The mean sodium excretion in rural community is significantly higher, it needs a further research on common type of food in those different area. The similar mean of urinary sodium excretion between hypertensive and non hypertensive subjects indicate the sodium retention as a sign of salt sensitive hypertension.

Conclusion: Mean urinary sodium excretion in rural community is significantly higher compare to urban community. Mean sodium excretion in hypertensive patients is not different with nonhypertensive patients.

Keywords: hypertension; rural community; salt excretion; urban community

COMPARISON OF MERCURY, ANEROID AND DIGITAL SPHYGMOMANOMETER IN COMMUNITY SETTING

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Introduction: The mercury sphygmomanometer has been the gold standard for blood pressure measurement, but it is not practical to be used in community setting. Aneroid and digital sphygmomanometers portability are higher compared to mercury device, but the reliability are still in doubt. The purpose of this study is to compare blood pressure measurement by mercury, aneroid and digital sphygmomanometer.

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