This was a descriptive study conducted at the outpatient clinic and wards of Inte-
ral Medicine Department, dr. Mohammad Hoesin (RSMH) hospital Palembang from February to August 2014. The subjects were hypertensive patients with hyper-
uricemia. We collected 32 subjects, 53.1% males and 46.9% women. Mean uric acid was 7.85 ± 1.47 mg/dl and plasma ET - 1 levels was 1.555 (0.948–9.688). The cor-
relation between uric acid and plasma ET-1 level was significant, p value = 0.002,
and R square = 0.249. This study showed there was moderate correlation between serum uric acid and plasma ET-1 level.

Keywords: ET-1; hypertension; hyperuricemia

ABDOMINAL ADIPOSE TISSUE WAS ASSOCIATED WITH
GLOMERULAR HYPERPERFILTRATION AMONG NON-DIABETIC AND
NORMOTENSIVE ADULTS WITH A NORMAL BODY MASS INDEX

Johngilwan Lee 1, Hye Jin Kim 2, Belong Cho 3, Jin Ho Park 2, Ho Chun Choi 2, Cheol Min Lee 3, Seung Won Oh 1, Hysukae Kwon 2, Nam Ju Heo 2
1 Department of Internal Medicine, Hallym University Ganghang Sacred
Heart Hospital, Seoul Korea, 2 Department of Family Medicine, Seoul
National University Hospital, Seoul National University College of
Medicine, South Korea, 2 Department of Family Medicine, Healthcare
System Gangnam Center of Seoul National University Hospital,
3 Subdivision of Nephropathy, Department of Internal Medicine, Healthcare
System Gangnam Center, Seoul National University Hospital

Glomerular hyperfiltration is recognized as an early marker of progressive kidney
dysfunction in the obese population. This study aimed to identify the relationship
between glomerular hyperfiltration and body fat distribution measured by computed
tomography (CT) in healthy Korean adults.

The study population included individuals aged 20–64 years who went a routine
health check-up including an abdominal CT scan. We selected 4,378 individuals
without diabetes, hypertension, overt proteinuria, or hematuria. Creatinine clearance
was estimated using the Cockcroft-Gault equation and glomerular hyperfiltration
was defined as the highest quintile of creatinine clearance.

The prevalence of glomerular hyperfiltration increased significantly according to the
subcutaneous and visceral adipose tissue areas (SAT: men, OR = 14.0 (9.02–21.92),
women, OR = 9.37 (5.81–15.12); VAT: men, OR = 16.30 (4.25–65.35); women, OR =
8.91 (5.24–15.15) for the comparisons of lowest vs. highest quartile; all P for trend
<0.001 in multivariate analysis. After stratification by body mass index (normal
<23 kg/m², overweight ≥ 23 kg/m²), subjects with greater subcutaneous adipose
tissue, even those in the normal BMI group, had a higher prevalence of glomerular
hyperfiltration (men, OR = 6.44 (1.79–23.21), P for trend <0.006; women, OR = 4.10
(2.28–7.38), P for trend <0.001 for the comparisons of lowest vs. highest quartile).
The visceral adipose tissue area was also associated with glomerular hyperper-
filtration both in men and women with normal BMIs (men, OR = 5.09 (1.76–14.68);
women, OR = 4.58 (2.36–8.88)). Among women, the odds ratio of the association
of glomerular hyperfiltration with subcutaneous abdominal adipose tissue increased
after menopause.

Subcutaneous and visceral adipose tissue areas are positively associated with
glomerular hyperfiltration in healthy Korean adults without diabetes or hyperten-
sion. Even in the normal BMI group, subjects with greater subcutaneous and visceral
adipose tissue had a higher prevalence of glomerular hyperfiltration.

COMPARISON ON STATIN USE AMONG HYPERTENSIVE PATIENTS BETWEEN FRAMINGHAM RISK SCORE AND POOLED
cOHORT RISK SCORE

NurFarhanaMohd Zaidi 1, Su May Liew 1, Karuthan Chinnia 2, Ez Ming Kho 1
1 University of Malaya Primary Care Research Group (UMPCRG), Faculty
of Medicine, University of Malaya, Kuala Lumpur, Malaysia, 2 Department
of Social and Preventive Medicine, Faculty of Medicine, University of
Malaya, Kuala Lumpur, Malaysia

Background: Statin is recommended for individuals with an estimated Framingham
Risk Score (FRS) of ≥20%. The 2013 ACC/AHA recommends statins for those with
a pooled cohort risk score (PCRS) ≥ 7.5%.

Objectives: To compare statin use in different CV risk category of FRS and PCRS.

Methods: This was a retrospective review study conducted at a primary care clinic
in Kuala Lumpur, Malaysia. 883 medical records of hypertensive patients that have
attended the clinic for at least one year were selected through systematic random
sampling (1:4). CV risk scores were calculated for each individual using FRS and
PCRS. FRS has three risk groups, low (≤0.1%), medium (10%–20%) and high >20%).
The PCRS is defined as low (<7.5%) and high (≥7.5%).

Results: The mean age of the patients was 61.1 ± 10.5 years and 61.7% were
female, 65.8 (74.5%) were on statin. The proportion of statin use in different risk
groups was: 74.6% (262) in FRS high risk, 76.1% (526) in the FRS medium and high

Keywords: ET-1; hypertension; hyperuricemia

THE ASSOCIATIONS OF MTHFR C677T MUTATION AND PLASMA HOMOCYSTEINE LEVEL WITH CAROTID INTEIMA-MEDIA
THICKNESS

Muhammad Muan 1, Tanith Indrajaya 1, Yiwun Fu, Syarid Husin 3, Ali Ghani 3
1 Department of Internal Medicine, M. Hoesin General Hospital, Sriwijaya
University, Palembang, Indonesia, 2 Clinical Microbiology Lab. of M. Hoesin
Gen. Hospital, Sriwijaya University Palembang, Indonesia, 3 Department of
Nutrition, Faculty of Medicine, Sriwijaya University, Palembang, Indonesia

Background and Objective: Mild hyperhomocysteinemia has emerged as a risk
factor for atherosclerosis. The genetic data of 5,10 methylenetetrahydrofolate reduc-
tase (MTHFR), a regulatory enzyme of homocysteine (Hcy) metabolism, among South-East Asian is conflicting and not often especially of cardiocerebrovascular
disease subjects.

Methods: This study measured carotid IMT, fasting plasma Hcy and analyzed the
MTHFR C677T genotype in cross sectional study of 40 hypertensive Malayan race
> 45 yrs of age with acute ischemic stroke in Palembang Indonesia. Biochemical
data were obtained within the first 48 hours of stroke onset. Subjects with previous
history of CVD, malignancy, renal failure and DM were excluded.

Results: MTHFR 677T/T mutation was observed in 3/40 (7.5%), heterozygoc-
ous (C/T) 27/40 (67.5%), and 10/40 (25%) with the wild type (C/C) genotype. Plasma
Hcy level was found as 10.5 years and 61.7% were
female, 65.8 (74.5%) were on statin. The proportion of statin use in different risk
groups was: 74.6% (262) in FRS high risk, 76.1% (526) in the FRS medium and high

Keywords: carotid and vertebro-basilar arteries; Doppler ultrasonography; pos-
terior circulation; subclavian steal syndrome

CORRELATION BETWEEN URIC ACID SERUM AND ENDOTHELIN -1 PLASMA LEVELS IN HYPERTENSIVE PATIENTS IN DR. MOHAMMAD HOESIN HOSPITAL PALEMBANG

D.P. Mulia 1, Z. Ali 2
1 Internal Medicine Department Medical Faculty of Sriwijaya University, 2 Division of Nephrology and Hypertension Internal Medicine Department Medical Faculty of Sriwijaya University

Hypertension and hyperuricemia are associated with cardiovascular risk. Hyper-
uricemia activated the renin-angiotensin-aldosterone system (SRAA) through activation of angiotensin - I to angiotensin - II, where the effect of the angiotensin - II
will lead to increased pressure intraglomerular, macrophage activation and cytokine
production, as well as vasoconstriction effect on blood vessels. This condition will
increased endothelin -1 (ET - 1), adhesion molecules, nuclear factor -κB (NF -κB), lower nitric oxide (NO) and nitric oxide synthase uncoupling and increase
reactive oxygen species (ROS). Increased levels of ET -1 is considered as one of
the strongest independent factor associated with cardiovascular disease. The aim of
this study was to know the correlation between uric acid serum and plasma ET-1 levels.

Keywords: C677T; Carotid IMT; Homocysteine; MTHFR

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