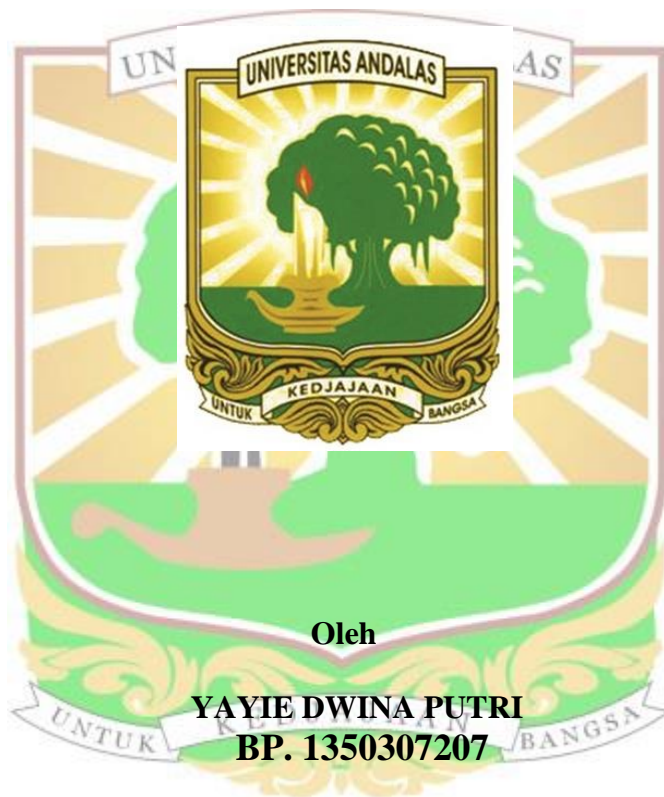


**KORELASI KADAR HOMOSISTEIN DENGAN  
KOLESTEROL *HIGH DENSITY LIPOPROTEIN*  
SERUM PADA PASIEN INFARK  
MIOKARD AKUT**

**TESIS**



**Pembimbing I Prof. Rismawati Yaswir, dr., SpPK (K)**

**Pembimbing II Lillah, dr., SpPK (K)**

**Pembimbing III Tuty Prihandani, dr., SpPK**

**PROGRAM PENDIDIKAN DOKTER SPESIALIS 1  
PATOLOGI KLINIK FK UNAND/RSUP Dr. M DJAMIL  
PADANG  
2017**

**KORELASI KADAR HOMOSISTEIN DENGAN KOLESTEROL  
HIGH DENSITY LIPOPROTEIN SERUM PADA PASIEN  
INFARK MIOKARD AKUT**

**ABSTRAK**

**Latar Belakang:** Infark miokard akut (IMA) merupakan satu dari manifestasi utama penyakit jantung koroner yang menyebabkan kematian tertinggi di seluruh dunia. Hiperhomosisteinemia, faktor risiko penyakit kardiovaskular, disebabkan oleh gangguan nutrisi atau genetik pada metabolisme homosistein. Peranan hiperhomosisteinemia pada perubahan metabolisme lipid diduga memegang peranan penting dalam peningkatan risiko penyakit kardiovaskular. Hiperhomosisteinemia menyebabkan penurunan konsentrasi kolesterol *High Density Lipoprotein* (HDL) serum dengan menghambat sintesis apo-A1 (apolipoprotein utama kolesterol HDL) di hepar.

**Tujuan:** Membuktikan korelasi kadar homosistein dengan kadar kolesterol HDL serum pada pasien IMA.

**Metode:** Penelitian ini merupakan penelitian analitik dengan rancangan potong lintang terhadap 40 orang pasien IMA yang memenuhi kriteria inklusi dan eksklusi serta melakukan pemeriksaan darah di Laboratorium Sentral RSUP Dr. M. Djamil Padang dan Laboratorium Biomedik Fakultas Kedokteran Universitas Andalas. Penelitian dilakukan pada bulan Mei 2016-Agustus 2017. Pemeriksaan kadar homosistein dilakukan dengan metode ELISA. Pemeriksaan kadar kolesterol HDL dilakukan dengan metode kolorimetrik enzimatis homogen. Data dianalisis dengan uji korelasi Spearman.

**Hasil:** Subjek penelitian berjumlah 40 orang dengan jenis kelamin laki-laki 30 (75%) dan perempuan 10(25%), rerata umur 61,08(11,09) tahun. Rerata kadar kolesterol HDL subyek penelitian adalah 41,93(13,12) mg/dL. Rerata kadar homosistein subjek penelitian adalah 25,36(22,2)  $\mu\text{mol/L}$ . Uji korelasi Spearman menunjukkan korelasi kuat antara kadar homosistein dan kadar kolesterol HDL dengan nilai  $r=-0,603$  dan nilai  $p<0,01$ .

**Simpulan:** Kadar homosistein dengan kadar kolesterol HDL pada pasien IMA memiliki korelasi negatif kuat.

**Kata Kunci:** *High density lipoprotein*, homosistein, infark miokard akut

**CORRELATION OF SERUM HIGH DENSITY LIPOPROTEIN  
CHOLESTEROL AND HOMOCYSTEINE LEVEL IN PATIENT  
WITH ACUTE MYOCARDIAL INFARCTION**

**ABSTRACT**

**Background:** Acute Myocardial Infarction (AMI), one of the main manifestation of coronary heart disease, is major cause of death worldwide. Hyperhomocysteinemia, a risk factor for cardiovascular disease, is caused by nutritional or genetic disturbances in homocysteine metabolism. The role of hyperhomocysteinemia in altered lipid metabolism presumed holds the key to an increased risk of cardiovascular disease. Hyperhomocysteinemia cause the reduce of serum High Density Lipoprotein (HDL) cholesterol level by inhibit hepatic synthesis of apo-AI (major apolipoprotein HDL).

**Objective:** To determine the correlation of homocysteine and HDL cholesterol level in patient with AMI.

**Method:** This was an analytical study with cross-sectional design in 40 patients AMI who meet the inclusion and exclusion criteria and conduct blood test at the Central Laboratory of Hospital Dr. M. Djamil Padang and Biomedical Laboratory Faculty of Medicine Andalas University. The study was conducted in May 2016-Agustus 2017. Level of homocysteine was performed by ELISA method. High Density Lipoprotein level was performed by enzymatic colorimetric method. Data were analyzed by Spearman's correlation test.

**Result:** Research subjects were 40 people with male gender 30 (75) and female 10 (25), mean age 61,08 (11,09) year. The mean level of HDL cholesterol in patients with AMI is  $41,93 \pm 13,12$  mg/dL. The mean level of homocysteine in patients with AMI is  $25,36 \pm 22,2$   $\mu$ mol/L. Spearman's correlation test showed a strong correlation between the levels of homocysteine and HDL cholesterol with  $r=-0,603$  and  $p<0,01$ .

**Conclusion:** Homocysteine level and HDL cholesterol in AMI patients has a strong negative correlation.

**Keywords:** High density lipoprotein, homocysteine, acute myocardial infarction.