

Tesis

**KORELASI RASIO NEUTROFIL/LIMFOSIT DAN
RASIO TROMBOSIT/LIMFOSIT DENGAN
STENOSIS ARTERI KORONER PADA
ANGINA PEKTORIS STABIL**



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ABSTRAK

Pendahuluan: Aterosklerosis merupakan suatu proses inflamasi kronis yang menyebabkan penyakit jantung koroner dengan salah satu manifestasi klinis angina pectoris stabil (APS). Rasio neutrofil/limfosit (RNL) dan rasio trombosit/limfosit (RTL) merupakan penanda inflamasi sistemik yang berhubungan dengan *outcome* kardiovaskular yang buruk. Angiografi koroner dilakukan untuk mengetahui derajat stenosis arteri koroner akibat proses aterosklerosis. Penelitian ini bertujuan untuk mengetahui korelasi RNL dan RTL dengan stenosis arteri koroner.

Metode: Penelitian analitik dengan rancangan potong lintang dilakukan terhadap 30 pasien APS yang menjalani angiografi koroner elektif di RSUP Dr. M. Djamil Padang. Penelitian dilaksanakan mulai November 2017 hingga Oktober 2018. Pemeriksaan hematologi lengkap dilakukan dengan alat hematologi otomatis. RNL dan RTL dihitung sebagai berturut-turut perbandingan jumlah neutrofil absolut dengan limfosit absolut dan perbandingan jumlah trombosit dengan limfosit absolut. Data dianalisis dengan uji korelasi Spearman, bermakna bila $p < 0,05$.

Hasil: Subjek penelitian terdiri dari 30 pasien dengan rata-rata umur 56,5 (10,4) tahun, dengan 73,3% adalah subjek laki-laki. Nilai rata-rata RNL dan RTL adalah berturut-turut 2,54 (0,97) dan 122,04 (37,84), dengan rentang berturut-turut 1,21–5,32 dan 68,55–244,85. Rata-rata stenosis arteri koroner adalah 82% (13,3%) dengan rentang 50%–95%. Rasio neutrofil/limfosit dan RTL memiliki korelasi positif bermakna dengan stenosis arteri koroner ($r=0,365$, $p=0,048$ dan $r=0,360$, $p=0,050$).

Simpulan: Rasio neutrofil/limfosit dan rasio trombosit/limfosit memiliki korelasi positif bermakna dengan stenosis arteri koroner pada pasien APS di RSUP Dr. M. Djamil Padang. Penelitian lebih lanjut diperlukan dengan desain penelitian kohor prospektif dan pengelompokan subjek berdasarkan faktor risiko yang dimiliki.

Kata Kunci: angina pectoris stabil, derajat stenosis arteri koroner, rasio neutrofil/limfosit, rasio trombosit/limfosit

CORRELATION OF NEUTROPHIL-TO-LYMPHOCYTE RATIO AND PLATELET-TO-LYMPHOCYTE RATIO WITH CORONARY ARTERIAL STENOSIS IN STABLE ANGINA PECTORIS

ABSTRACT

Introduction: Atherosclerosis is a chronic inflammatory process that causes coronary heart disease, stable angina pectoris (SAP) is one of the clinical manifestations. Neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) are markers of systemic inflammation associated with poor cardiovascular outcomes. Coronary angiography is performed to determine the coronary artery stenosis due to the atherosclerosis process. Aim of this study was to determine the correlation of NLR and PLR with coronary arterial stenosis.

Methods : This was an analytical study with cross-sectional design to thirty SAP patients undergoing elective coronary angiography at Dr. M. Djamil hospital Padang. The study was conducted from November 2017 to October 2018. Complete blood count was performed by using automatic hematology analyzer, while NLR and PLR were calculated as the ratio of absolute neutrophil count to absolute lymphocyte count and as the ratio of platelet count to absolute lymphocyte count. Data were analyzed by Spearman's correlation test, statistical significant if $p < 0.05$.

Results: There were thirty subjects with mean age was 56.5 (10.4) years old, with 73.3% were males. The mean of NLR and PLR were 2.54 (0.97) and 122.04 (37.84) respectively with ranges were 1.21–5.32 and 68.55–244.85 respectively. The mean coronary arterial stenosis was 82% (13.3%) with range (50%–95%). There were positive correlation between NLR and PLR with coronary arterial stenosis ($r=0.365$, $p=0.048$ and $r=0.360$, $p=0.050$).

Conclusion: NLR and PLR had positive correlation with the coronary arterial stenosis in SAP patients at Dr. M. Djamil Padang hospital. Further study is needed by using cohort prospective design and grouping subjects based on their risk factors.

Keywords: stable angina pectoris, coronary arterial stenosis degree, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio