Titik Potong Rasio Hitung Neutrofil dan Limfosit untuk Memprediksi Derajat Steatosis dan Fibrosis Penyakit Perlemakan Hati Non Alkoholik = Diagnostic Value of Neutrophil to Lymphocyte Ratio in Non-Alcoholic Fatty Liver Disease evaluated using Transient Elastography (TE) with Controlled Attenuated Parameter (CAP)

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Abstrak

ABSTRAK
Non-alcoholic fatty liver disease (NAFLD) adalah penyakit hati kronik yang ditandai dengan akumulasi lemak berlebihan di hati. Elastografi Transien (ET) dan metode Controlled Attenuation Parameter (CAP) merupakan metode pemeriksaan non-invasif untuk menilai derajat fibrosis dan steatosis, namun tidak tersedia di seluruh rumah sakit di Indonesia. Rasio Neutrofil Limfosit (RNL) merupakan penanda peradangan sederhana yang berpotensi memprediksi luaran penyakit. Tujuan : Mengetahui nilai diagnostik RNL sebagai indikator derajat keparahan steatosis dan fibrosis NAFLD. Metode : Penelitian ini adalah studi potong lintang menggunakan data sekunder dari data rekam medis tahun 2016-2018. Analisis statistik deskriptif dan analitik berupa uji korelasi, Receiver Operating Curve (ROC) dan Area Under The Curve (AUC) dipakai untuk mengetahui luaran studi. Hasil : Dari 106 subjek penelitian, kebanyakan pasien adalah perempuan (62,3%) berusia rata-rata 57,29 tahun dan menderita sindrom metabolik (77,4%). Sebagian besar pasien memiliki derajat steatosis sedang-berat (66%) dengan rerata ET 6,14 (2,8-18,2). Terdapat korelasi antara nilai CAP (r=0,648; p<0,001) dan ET (r=0,621; p<0,001) dengan RNL. Penggunaan RNL untuk menilai derajat steatosis sedang-berat memiliki titik potong 1,775 dengan sensitivitas, spesifisitas, NDP dan NDN sebesar 81,5%, 80,6%, 89,1%, dan 69,1%; titik potong 2,150 untuk menilai fibrosis signifikan dengan sensitivitas, spesifisitas, NDP dan NDN berurutan sebesar 92,3 %; 87,5%; 70,6%; dan 97,2%.
Simpulan : RNL memiliki korelasi positif dan signifikan terhadap derajat steatosis (CAP) dan fibrosis (ET) dengan sensitivitas dan spesifisitas yang cukup tinggi.
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<i>ABSTRACT
Non-alcoholic fatty liver disease (NAFLD) is a chronic inflammatory disease with excessive fat accumulation in the liver. Transient Elastography (TE) with Controlled Attenuation Parameter (CAP) is a device and method to examine the degree of fibrosis and steatosis. However, this device is not widely available across Indonesia. Neutrophil and Lymphocyte Ratio (NLR) is a simple marker for inflammation which has a potency to predict disease outcome. This study aims to know the diagnostic value of NLR as the indicator of steatosis and fibrosis severity. Methods: This was a cross-sectional study with consecutive sample collection. We used secondary data from medical record, starting from 2016-2018. A descriptive and analytic statistic, including correlation test, multivariate linear regression, t test, Receiver Operating Curve (ROC) and Area Under the Curve (AUC) were done to know the outcome of the study. Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) Version 20.0 (SPSS Inc, Chicago, Illinois). A P value <0.05 was considered as statistically significant. Results: Out of 106 subjects, 62.3% patients were women with the mean of age 57.29 years old and 77.4% had metabolic

syndrome. Most patients had moderate to severe steatosis degree (66%) with the mean of ET mean 6.14 (2.8-18.2). There was a positive correlation between CAP and TE compared with NLR with r=0.647 ($p<0.001$) and r=0.621 ($p<0.001$) respectively. The use of RNL to assess moderate-severe steatosis has a cutoff point of 1.775 with sensitivity, specificity, PPV and NPV respectively at 81,5%, 80,6%, 89,1%, and 69,1%; cutoff point 2,150 to assess significant fibrosis with sensitivity, specificity, PPV and NPV of 92.3 %, 87.5%, 70.6%, and 97.2% respectively. Conclusion: NLR has a positive and significant correlation with the degree of steatosis and fibrosis with high sensitivity and specificity in comparison with TE/CAP.