

**HUBUNGAN KADAR *HIGH SENSITIVITY C REACTIVE PROTEIN* DAN
AKTIVASI PLATELET PADA PASIEN INFARK MIOKARD AKUT**

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INTISARI

Latar Belakang: Permasalahan penyakit jantung koroner, termasuk infark miokard akut (IMA), telah menjadi permasalahan klinis signifikan. Inflamasi merupakan mekanisme utama terjadinya IMA yang dapat diukur dengan *high sensitivity C Reactive Protein* (hsCRP). Platelet merupakan penghubung utama antara proses inflamasi, trombosis dan aterogenesis. Dengan demikian, walaupun diketahui bahwa inflamasi dan platelet saling berhubungan, hubungan tersebut perlu untuk diukur kekuatan hubungannya.

Metode: Penelitian dilakukan secara potong lintang dengan melibatkan 120 pasien IMA yang dirawat di RSUP Dr. Sardjito. Nilai *mean platelet volume* sebagai penanda aktivasi platelet menggunakan hasil pemeriksaan laboratorium rutin untuk pasien IMA. Kadar hsCRP diukur sebelum mendapatkan terapi. Perbedaan kadar hsCRP dan MPV diuji dengan uji Mann Whitney. Korelasi kadar hsCRP dan MPV diuji dengan uji Spearman. Nilai signifikansi yang diterima adalah $p < 0,05$.

Hasil: Median dan rentang interkuartil MPV pada kelompok dengan hsCRP rendah (9,48 dan 1,65) dan tinggi (10,30 dan 1,00) berbeda signifikan dengan $p=0,004$. Median dan rentang interkuartil hsCRP pada kelompok dengan MPV rendah (0,29 dan 0,28) dan tinggi (0,65 dan 1,34) berbeda signifikan dengan $p=0,001$. Korelasi hsCRP dan MPV adalah lemah namun signifikan secara statistik ($r=0,379$, $p=0,000$).

Kesimpulan: Kadar hsCRP berkorelasi positif lemah dengan nilai MPV pada pasien IMA.

Kata Kunci: infark miokard akut, inflamasi, aktivasi platelet, *mean platelet volume*, *high sensitivity C Reactive Protein*

**RELATION OF HIGH SENSITIVITY C REACTIVE PROTEIN AND PLATELET
ACTIVATION IN ACUTE MYOCARDIAL INFARCT PATIENTS**

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ABSTRACT

Background: Problems of coronary heart disease, including acute myocardial infarction (AMI), has become a significant clinical problem. Inflammation is the primary mechanism for AMI occurrence which can be measured with high sensitivity C Reactive Protein (hsCRP). Platelets are the primary interface between the process of inflammation, thrombosis and atherosclerosis. Although it is known that inflammation and platelet related, how strong the relation in AMI patients is still in question. Therefore, this study investigates the correlation between MPV and hsCRP in AMI patients.

Method: Cross sectional study involved 120 patients with AMI treated in RSUP Dr. Sardjito. Mean platelet volume (MPV) value as a platelet activation marker was measured in routine laboratory examination. Level of hsCRP is measured was measured from blood taken before therapy. The correlation between levels and MPV was analysed with Spearman test. The value is significant if $p < 0.05$.

Result: The median and interquartile range of MPV between the group with low hsCRP (9.70 and 1.65) and high (10.30 and 1.00) are different significantly with $p = 0.004$. The median and interquartile range of hsCRP between group with low MPV (0.29 and 0.28) and high (0.65 and 1.34) are different significantly $p = 0.001$. The correlation of hsCRP and MPV is weak despite statistically significant ($r = 0.379$, $p = 0.000$).

Conclusion: MCV value and hsCRP level have positive weak correlation in AMI patients.

Keywords: acute myocardial infarction, inflammation, platelet activation, mean platelet volume, high sensitivity C Reactive Protein