

ABSTRACT

VALUE OF MEAN PLATELET VOLUME (MPV) AND PLATELET DISTRIBUTION WIDTH (PDW) RELATION TO PLATELET COUNT ON DENGUE HAEMORRHAGE FEVER PATIENTS (DHF) IN URIP SUMOHARJO

By

Putu Arya Laksmi Amrita Kirana

Background: Dengue Hemorrhagic Fever (DHF) is one of the most common tropical infectious diseases in Indonesia caused by dengue virus, characterized by thrombocytopenia. The mechanism of thrombocytopenia is thought to be caused by depression of megakaryocyte function. There are several platelet indices known as platelet activation indicator, *Mean Platelet Volume* (MPV), and *Platelet Distribution Width* (PDW).

Methods: The design of this study was correlative cross sectional analysis of 38 dengue patients in Urip Sumoharjo Hospital with age range 15 - 60 years. Data taken in the form of primary data that is result of blood examination of DHF patient. The variables of this research are MPV value and PDW value and platelet count of DHF patients

Results: The mean platelet count of $82,750 \pm 27,710$ cells / mm³ and MPV content has an average of 10.9 μ m³ and rete of PDW level of 15,6 fl. Pearson correlative test results of MPV to platelet count are 0.001 (p-value <0.05) and r value of -0.5. Spearman test result of PDW value to Number of Platelet is 0,021 (p-value <0,05) and r value equal to -0,375.

Conclusion: There is a negative correlation between MPV value and platelet count with moderate correlation strength, and there is weak correlation between PDW value and platelet count.

Keywords: Dengue hemorrhagic fever, mean platelet volume, platelet distribution width, thrombocytopenia

ABSTRAK

HUBUNGAN NILAI *MEAN PLATELET VOLUME* (MPV) DAN *PLATELET DISTRIBUTION WIDTH* (PDW) TERHADAP JUMLAH TROMBOSIT PADA PASIEN DEMAM BERDARAH DENGUE (DBD) DI RS URIP SUMOHARJO

Oleh

Putu Arya Laksmi Amrita Kirana

Latar Belakang: Demam Berdarah Dengue (DBD) merupakan salah satu penyakit infeksi tropis terbanyak di Indonesia yang disebabkan oleh virus dengue, yang ditandai dengan trombositopenia. Mekanisme trombositopenia diduga disebabkan oleh depresi fungsi megakariosit. Terdapat beberapa indeks trombosit yang diketahui sebagai indikator aktivasi trombosit, yaitu *Mean Platelet Volume* (MPV), dan *Platelet Distribution Width* (PDW).

Metode: Desain penelitian ini adalah analitik korelatif *cross sectional* terhadap 38 pasien DBD di RS Urip Sumoharjo dengan rentang usia 15 – 60 tahun. Data yang diambil berupa data primer yaitu hasil pemeriksaan darah pasien DBD. Variabel penelitian ini yaitu nilai MPV dan nilai PDW serta jumlah trombosit pasien DBD.

Hasil Penelitian: Rerata jumlah trombosit sebesar 82.750 ± 27.710 sel/mm³ dan nilai MPV memiliki rata-rata sebesar 10,9 μm^3 dan rerata nilai PDW sebesar 15,6 fl. Hasil uji korelatif Pearson nilai MPV terhadap jumlah trombosit yaitu 0,001 ($p\text{-value} < 0,05$) dan $r\text{ value}$ sebesar -0,5. Hasil uji Spearman nilai PDW terhadap Jumlah Trombosit yaitu 0,021 ($p\text{-value} < 0,05$) dan $r\text{ value}$ sebesar -0,375.

Simpulan: Terdapat korelasi negatif antara nilai MPV dan jumlah trombosit dengan kekuatan korelasi sedang, dan terdapat korelasi antara nilai PDW dan jumlah trombosit.

Kata kunci: demam berdarah dengue, *mean platelet volume*, *platelet distribution width*, trombositopenia