

INTISARI

Latar belakang: Peningkatan jumlah trombosit yang aktif dan mengekspresikan *P-selectin* akan terjadi sebagai akibat dari *platelet storage lesion* (PSL) yang timbul selama penyimpanan trombosit. Ekspresi *P-selectin* yang meningkat ini dapat mengakibatkan peningkatan bersihan trombosit pada pascatransfusi sehingga mengurangi keberhasilan transfusi trombosit yang dinilai dengan *Percentage Platelet Recovery* (PPR). Beberapa penelitian masih mendapatkan hasil yang bervariasi dalam membuktikan hubungan antara ekspresi *P-selectin* pada trombosit dengan nilai PPR

Tujuan: Mengetahui korelasi antara persentase trombosit yang mengekspresikan *P-selectin* dan nilai *Percentage Platelet Recovery* (PPR) pascatransfusi tromboferesis pada pasien dewasa dengan keganasan hematologi.

Metode: Penelitian ini merupakan penelitian analitik observasional melibatkan pasien trombositopenia dengan keganasan hematologi di ruang rawat inap dewasa di RSUP Dr. Sardjito. Setiap produk tromboferesis diukur persentase *P-selectin* sebelum ditransfusikan. Penghitungan PPR dilakukan satu jam pascatransfusi. Uji korelasi dilakukan antara trombosit yang mengekspresikan *P-selectin* dan PPR. Uji korelasi dilakukan menggunakan uji *Spearman* dan analisis data penelitian menggunakan SPSS versi 25. Nilai p dianggap signifikan jika $p < 0,05$.

Hasil: Penelitian ini melibatkan 39 subjek dengan proporsi laki-laki 27 subjek (69,2%) dan perempuan 12 subjek (30,8%). Splenomegali dialami oleh 15,4% pasien. Pasien yang mengalami perdarahan sebanyak 30,8%. Pasien mengalami demam sebanyak 10,3%. Pasien dengan riwayat transfusi sebelumnya sebesar 84,6%. Respon PPR satu jam pascatransfusi didapatkan PPR $< 30\%$ (respon buruk) sebesar 64,1%. Tidak ada korelasi antara persentase *P-selectin* dengan nilai PPR satu jam pascatransfusi tromboferesis, $r = -0,10$ ($p > 0,05$).

Simpulan: Tidak terdapat korelasi antara persentase trombosit yang mengekspresikan *P-selectin* dengan nilai PPR satu jam pascatransfusi tromboferesis.

Kata kunci: transfusi trombosit, *P-selectin*, PPR, tromboferesis

ABSTRACT

Background: An increase in the number of active platelets expressing P-selectin will occur as a result of the platelet storage lesion (PSL) that occurs during platelet storage. This increased expression of P-selectin can lead to an increase in pascatransfusion platelet clearance, thereby reducing the success of platelet transfusion as assessed by Percentage Platelet Recovery (PPR). Several studies still get varying results in proving the relationship between P-selectin expression on platelets and PPR values.

Objective: To determine the correlation between the percentage of platelets expressing P-selectin and the value of Percentage Platelet Recovery (PPR) Pascatransfusion of thrombopheresis in adult patients with hematological malignancies.

Method: This study is an observational analytic study involving thrombocytopenia patients with hematological malignancies in the adult inpatient ward at Dr. Sardjito. Each thrombopheresis product was measured the percentage of P-selectin before being transfused. PPR counts were performed one hour after transfusion. Correlation test was performed between platelets expressing P-selectin and PPR. Correlation test using Spearman test. Analysis of research data using SPSS version 25. The p value is considered significant if $p < 0.05$.

Results: This study involved 39 subjects, with the proportion of male 27 subjects (69,2%) and female 12 subjects (30,8%). The most common type of hematological malignancy was Acute Myeloid Leukemia (AML) as many as 18 subjects (46,2%). Splenomegaly was experienced by 15.4% of patients. Patients who experienced bleeding were 30.8%. Patients experienced fever as much as 10.3%. Patients had a history of previous transfusion of 84.6%. PPR response one hour post-transfusion obtained PPR $< 30\%$ (poor response) of 64.1%.

There was no correlation between the percentage of P-selectin and the PPR value one hour pascatransfusion thrombopheresis with a value of $r = -0.10$ ($p > 0.05$).

Conclusion: No correlation between the percentage of platelets expressing P-selectin and PPR one hour pascatransfusion thrombopheresis.

Keywords: platelet transfusion, P-selectin, PPR, thrombopheresis