

## INTISARI

**Latar belakang:** Jumlah trombosit aktif yang meningkat dan mengekspresikan *P-selectin* akan terjadi sebagai dampak dari *platelet storage lesion* (PSL) yang terjadi selama trombosit mengalami penyimpanan. Peningkatan bersihan trombosit akibat ekspresi *P-selectin* yang meningkat ini akan mengurangi keberhasilan transfusi trombosit yang dinilai dengan *Corrected Count Increment* (CCI). Beberapa penelitian masih memperoleh hasil yang bervariasi dalam menilai hubungan antara ekspresi *P-selectin* pada trombosit donor dengan nilai CCI.

**Tujuan:** Mengetahui korelasi antara persentase trombosit donor yang mengekspresikan *P-selectin* dan nilai *Corrected Count Increment* (CCI) pascatransfusi tromboferesis pada pasien dewasa dengan keganasan hematologi.

**Metode:** Penelitian ini menggunakan penelitian analitik observasional melibatkan pasien trombositopenia dengan keganasan hematologi di ruang rawat inap dewasa di RSUP Dr. Sardjito. Persentase *P-selectin* diukur pada setiap produk tromboferesis donor sebelum ditransfusikan. Penghitungan CCI dilakukan satu jam pascatransfusi. Uji korelasi dilakukan antara trombosit donor yang mengekspresikan *P-selectin* dan CCI. 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 42 subjek, dengan proporsi laki-laki 27 subjek (64,3%) dan perempuan 15 subjek (35,7%). Jenis keganasan hematologi yang terbanyak adalah Leukemia Myeloid Akut (AML) sebanyak 18 subjek (42,9%). Pasien yang dengan splenomegali sebanyak 14,3% pasien, perdarahan sebanyak 35,7%, demam sebanyak 9,5%, dan memiliki riwayat transfusi sebanyak 78,6%. Respon CCI 1 jam pasca transfusi diperoleh  $CCI \geq 7500$  (respon baik) sebesar 66,7%. Hasil uji statistik menunjukkan tidak terdapat hubungan antara persentase trombosit donor yang mengekspresikan *P-selectin* dengan nilai CCI 1 jam pasca transfusi tromboferesis dengan nilai  $r = -0,182$  ( $p > 0,05$ ).

**Simpulan:** Tidak terdapat hubungan antara persentase trombosit donor yang mengekspresikan *P-selectin* dengan nilai CCI 1 jam pasca transfusi tromboferesis.

**Kata kunci:** *P-selectin*, CCI, tromboferesis, transfusi tromboferesis

## ABSTRACT

**Background:** An increased number of activated platelets that express P-selectin will occur as a result of platelet storage lesion (PSL) that occurs during platelet storage. Increased platelet clearance due to increased P-selectin expression will reduce platelet transfusion success as assessed by Corrected Count Increment (CCI). Several studies still obtained mixed results in assessing the relationship between P-selectin expression in donor platelets and CCI values.

**Objective:** To determine the correlation between the percentage of donor platelets expressing P-selectin and post-transfusion thromboferesis Corrected Count Increment (CCI) values in adult patients with hematologic malignancies..

**Method:** This study used observational analytic research involving thrombocytopenia patients with hematological malignancies in adult inpatient rooms at Dr. Sardjito Hospital. The percentage of P-selectin was measured on each donor thromboferesis product before it was transfused. CCI counting was performed one hour post-transfusion. A correlation test was performed between donor platelets expressing P-selectin and CCI. The correlation test was performed using Spearman's test and data analysis was performed using SPSS version 25. The p value was considered significant if  $p < 0.05$ .

**Result:** This study involved 42 subjects, with the proportion of men 27 subjects (64.3%) and women 15 subjects (35.7%). The most common type of hematological malignancy was Acute Myeloid Leukemia (AML) as many as 18 subjects (42.9%). Patients with splenomegaly were 14.3%, bleeding was 35.7%, fever was 9.5%, and a history of transfusion was 78.6%. CCI response 1 hour after transfusion was obtained  $CCI \geq 7500$  (good response) by 66.7%. Statistical test results showed there was no relationship between the percentage of donor platelets expressing P-selectin and the CCI value 1 hour after thromboferesis transfusion with a value of  $r = -0.182$  ( $p > 0.05$ ).

**Conclusion:** There was no association between the percentage of donor platelets expressing P-selectin and the CCI value 1 hour after thromboferesis transfusion.

**Keywords:** P-selectin, CCI, thromboferesis, transfusion thromboferesis