

## INTISARI

### Latar belakang

Penderita keganasan hematologi seringkali mengalami kondisi trombositopenia sebagai bagian dari perjalanan penyakit maupun akibat komplikasi dari terapi yang dijalannya, hingga membutuhkan transfusi trombosit. Transfusi tromboferesis pada pasien keganasan hematologi ditujukan untuk memperbaiki keadaan umum dan meningkatkan kualitas hidup. Namun demikian tindakan ini berisiko terbentuknya alloantibodi dan penularan penyakit lewat transfusi darah, sehingga evaluasi pasca transfusi perlu dilakukan untuk menghindari transfusi berlebihan. Penilaian keberhasilan transfusi trombosit dapat diukur dengan menghitung *corrected count increment* (CCI) atau menggunakan *platelet increment* (PI) jika tidak ada data berat badan dan tinggi badan pasien.

### Tujuan

Mengevaluasi kesesuaian antara *platelet increment* dan *corrected count increment* dalam menilai keberhasilan transfusi tromboferesis pada pasien keganasan hematologi.

### Metode

Penelitian ini merupakan penelitian observasional potong lintang yang melibatkan 42 subjek penelitian dengan kriteria pasien dewasa keganasan hematologi yang dirawat inap dan menerima transfusi tromboferesis. Nilai CCI dan PI dihitung 1 jam pasca transfusi tromboferesis. Transfusi tromboferesis dinilai berhasil jika  $CCI \geq 7500$  atau  $PI \geq 10 \times 10^9/L$ . Penilaian kesesuaian ditetapkan dengan menggunakan *Cohen's Kappa*.

### Hasil

Pada penelitian terdapat 42 subjek penelitian keganasan hematologi dengan diagnosis sebagai berikut AML 18 pasien, ALL 6 pasien, CML 8 pasien, MDS 7 pasien, MM 2 pasien, dan *mixed leukemia* 1 pasien. Proporsi keberhasilan transfusi tromboferesis berdasarkan  $CCI \geq 7500$  dan  $PI \geq 10 \times 10^9/L$  secara berturut-turut 61,9% dan 71,4%. Uji beda keberhasilan transfusi berdasarkan CCI dan PI tidak ada perbedaan signifikan ( $p > 0,05$ ). Uji *Cohen's Kappa* antara CCI dan PI didapatkan nilai Kappa sebesar 0,788.

### Kesimpulan

Nilai *corrected count increment* memiliki kesesuaian substansial dengan *platelet increment* dalam menilai keberhasilan transfusi tromboferesis pada pasien keganasan hematologi.

**Kata Kunci:** transfusi, tromboferesis, CCI, PI

## ABSTRACT

### Background

Patients with haematological malignancies often experience thrombocytopenia, thus requiring platelet transfusions. The aims of thrombopheresis transfusion in patients with haematological malignancies are to improve the general condition and the quality of life. However, this procedure has risks, such as the formation of alloantibodies and transfusion-transmitted infections. Post-transfusion evaluation needs to be done to avoid excessive transfusion. Assessment of the success of platelet transfusion can be measured by calculating the corrected count increment (CCI) or using the platelet increment (PI) if the patient's body weight and height data are incomplete.

### Aim

To evaluate the concordance between platelet increment and corrected count increment in assessing thrombopheresis transfusions outcome in patients with haematological malignancy.

### Methods

This was an analytic observational study with a cross-sectional approach involving 42 subjects who were adult patients with haematological malignancy who were hospitalized and received thrombopheresis transfusion. CCI and PI values were calculated 1 hour after thrombopheresis transfusion. Thrombopheresis transfusion was successful if  $CCI \geq 7500$  or  $PI \geq 10 \times 10^9 /L$ . Concordance analysis was performed using Cohen's Kappa formula.

### Results

In this study, 42 haematological malignancy subjects consisted of 18 AML patients, 6 ALL patients, 8 CML patients, 7 MDS patients, 2 MM patients, and one mixed leukaemia patient. The proportion of successful thrombopheresis transfusion based on  $CCI \geq 7500$  and  $PI \geq 10 \times 10^9 /L$  were 61.9% and 71.4%, respectively. There was no significant difference in transfusion success based on CCI and PI ( $p > 0.05$ ). Cohen's Kappa test showed the Kappa value of 0.788.

### Conclusion

Corrected count increment has a substantial agreement with platelet increment in assessing the success of thrombopheresis transfusion in patients with haematological malignancy.

**Keywords:** transfusions, thrombopheresis, CCI, PI