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ANALISIS PERBEDAAN JUMLAH TROMBOSIT PADA PRODUK DARAH *THROMBOCYTE CONCENTRATE* (TC) BERDASARKAN METODE PENGOLAHAN TROMBOSIT (*Pooling* 4, 5, 6 kantong TC-PRP dan *Apheresis*) DI UTD-RSUD Dr. H. ABDUL MOELOEK PROVINSI LAMPUNG

xvi + 38 halaman, 3 gambar, 11 tabel, 15 lampiran

ABSTRAK

Thrombocyte Concentrate (TC) merupakan produk darah yang digunakan dalam terapi pasien dengan *trombositopenia*. Beberapa metode pengolahan *trombosit* dapat digunakan untuk menghasilkan jumlah *trombosit* yang optimal. Penelitian ini bertujuan untuk menganalisis perbedaan jumlah *trombosit* pada produk *Thrombocyte Concentrate* berdasarkan metode pengolahan (*Pooling* 4, 5, 6 kantong TC-PRP dan *Apheresis*). Penelitian ini menggunakan desain *cross-sectional* dengan jumlah sampel 40, masing-masing terdiri dari 10 sampel per kelompok metode. Pemeriksaan jumlah *trombosit* dilakukan menggunakan *Hematology Analyzer*. Data dianalisis secara *univariat* dan *bivariat*, dengan uji *One Way Anova* dan uji lanjut *Post-hoc Bonferroni* untuk mengidentifikasi perbedaan signifikan antar kelompok metode. Hasil penelitian menunjukkan rata-rata jumlah *trombosit* tertinggi ditemukan pada *Pooling* 6 (2.59×10^{11}), diikuti oleh *Apheresis* (2.47×10^{11}), *Pooling* 5 (2.16×10^{11}), dan *Pooling* 4 (1.50×10^{11}). Terdapat perbedaan signifikan antara *Pooling* 4 dan *Apheresis* ($p\text{-value} = 0.000 < 0.05$), sedangkan *Pooling* 5 ($p\text{-value} = 0.135 > 0.05$) dan *Pooling* 6 ($p\text{-value} = 1.000 > 0.05$) tidak terdapat perbedaan signifikan dibandingkan *Apheresis*. Metode *Apheresis* menghasilkan jumlah *trombosit* yang lebih stabil, sementara *Pooling* 5 dan *Pooling* 6 dapat menjadi alternatif yang cukup efektif jika *Apheresis* tidak tersedia. *Pooling* 4 kurang optimal untuk pasien dengan kebutuhan *trombosit* tinggi.

Kata Kunci : *Apheresis*, Jumlah *trombosit*, *Pooling*, *Thrombocyte Concentrate*, Transfusi Darah.

Daftar Bacaan : 19 (2015 – 2024)

**TANJUNGKARANG HEALTH POLYTECHNIC
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**ANALYSIS OF PLATELET COUNT DIFFERENCES IN
THROMBOCYTE CONCENTRATE (TC) BLOOD PRODUCTS BASED
ON PLATELET PROCESSING METHODS (Pooling 4, 5, 6 Bags of TC-PRP
and Apheresis) AT UTD - RSUD Dr. H. ABDUL MOELOEK LAMPUNG
PROVINCE**

xvi + 38 Pages, 11 Tables, 3 Picture, 15 Attachment

ABSTRACT

Thrombocyte Concentrate (TC) is a blood product used in the therapy of patients with thrombocytopenia. Several platelet processing methods can be used to obtain an optimal platelet count. This study aims to analyze differences in platelet counts in Thrombocyte Concentrate based on processing methods (Pooling 4, 5, 6 bags of TC-PRP, and Apheresis). This study employed a cross-sectional design with a total of 40 samples, consisting of 10 samples per method. Platelet count examination was conducted using the Hematology Analyzer. Data were analyzed univariately and bivariately, using One Way Anova and a Post-hoc Bonferroni test to identify significant differences between method groups. The results showed that the highest average platelet count was found in Pooling 6 (2.59×10^{11}), followed by Apheresis (2.47×10^{11}), Pooling 5 (2.16×10^{11}), and Pooling 4 (1.50×10^{11}). A significant difference was found between Pooling 4 and Apheresis ($p\text{-value} = 0.000 < 0.05$), while Pooling 5 ($p\text{-value} = 0.135 > 0.05$) and Pooling 6 ($p\text{-value} = 1.000 > 0.05$) showed no significant difference compared to Apheresis. The Apheresis method produced a more stable platelet count, while Pooling 6 could be an effective alternative if Apheresis is unavailable. Pooling 4 is less optimal for patients requiring high platelet counts.

Keywords : Apheresis, Blood Transfusion. Platelets, Pooling Thrombocyte Concentrate,

Reading List : 19 (2015 – 2024)