

**PENGARUH PERBEDAAN WAKTU PENGOLAHAN  
TROMBOSIT KONSENTRAT TERHADAP KADAR GLUKOSA  
SELAMA PENYIMPANAN DI RSUP DR. SARDJITO YOGYAKARTA**

**INTISARI**

**Latar Belakang** : Kebutuhan transfusi trombosit konsentrat semakin meningkat. Di Sardjito setiap bulannya dari 2500 kantong darah, 30% untuk transfusi trombosit konsentrat, namun sering terjadi penundaan pengolahan trombosit konsentrat. Penundaan pengolahan bisa menyebabkan terbentuknya PSL (*Platelet Storage Lesion*). Salah satu parameter PSL adalah glukosa. Penurunan kadar glukosa yang signifikan mempengaruhi kualitas trombosit konsentrat.

**Tujuan Penelitian** : Untuk mengetahui perbedaan rerata kadar glukosa dan korelasi kadar glukosa trombosit konsentrat antara kelompok waktu pengolahan (0 jam, 6 jam dan 16 jam) dengan lama penyimpanan (0, 1, 3, 6 hari).

**Metode Penelitian** : Penelitian ini menggunakan metode observasional dengan desain penelitian *cross-sectional* yang dilakukan di RSUP Dr. Sardjito terhadap 15 sampel kantong trombosit konsentrat. Sampel disimpan selama 0, 1, 3 dan 6 hari dengan waktu pengolahan 0 jam, 6 jam dan 16 jam.

**Hasil** : Terdapat perbedaan yang bermakna ( $p < 0,05$ ) rerata kadar glukosa antar kelompok waktu pengolahan pada hari ke-0, 1 dan 3, namun terdapat perbedaan yang tidak bermakna ( $p > 0,05$ ) pada hari ke-6. Terdapat perbedaan rerata kadar glukosa yang bermakna selama penyimpanan pada kelompok waktu pengolahan 0 dan 6 jam, namun terdapat perbedaan yang tidak bermakna pada kelompok 16 jam. Terdapat korelasi negatif antara kadar glukosa dengan lama penyimpanan pada kelompok waktu pengolahan 0 jam, 6 jam dan 16 jam.

**Kesimpulan** : Terdapat perbedaan rerata kadar glukosa dan korelasi kadar glukosa trombosit konsentrat antara kelompok waktu pengolahan (0 jam, 6 jam dan 16 jam) dengan lama penyimpanan (0, 1, 3 dan 6 hari).

**Kata Kunci** : trombosit konsentrat, glukosa, penyimpanan.

**THE EFFECT OF PROCESSING TIME DIFFERENCE OF  
PLATELET CONCENTRATES AGAINST GLUCOSE LEVELS  
DURING STORAGE IN RSUP DR. SARDJITO**

**ABSTRACT**

**Background:** The need for thrombocyte concentrate transfusion is increasing. In Dr. Sardjito hospital, every month 2500 bags of blood were transfused, of which 30% are platelets concentrates, but the delay of thrombocyte concentrates processing may happen frequently. Delay of processing may cause PSL (Platelet Storage Lesion). One of the parameters of the PSL is glucose. Glucose level may decrease significantly and affect the quality of thrombocyte concentrate.

**Objectives :** To know the difference of average glucose level and the correlation of glucose level between processing time group (0,6 and 16 hours) and length of storage (0,1,3 and 6 days).

**Methods :** This research used observational method with cross-sectional research design which was performed in RSUP Dr Sardjito. The research samples were 15 of thrombocyte concentrate bags. The samples were stored within 0 day, 1 day, 3 days and 6 days, with the processing time of 0 hour, 6 hours and 16 hours.

**Results :** There was significant difference ( $p < 0,05$ ) of average glucose level between processing time group in the day 0,1 and 3, but there was no significant difference ( $p > 0,05$ ) in day 6. There was significant difference of average glucose level during storage in the 0 and 6 hours time processing group but there was no significant difference in the 16 hours processing time group. There was negative correlation between glucose level with length of storage in the processing time group (0,6 and 16 hours).

**Conclusion:** There is a difference of average glucose level and the correlation of glucose level between processing time group (0,6 and 16 hours) with length of storage (0,1,3 and 6 days).

**Key words:** thrombocyte concentrate, glucose, storage.