

THE EFFECT OF SERUM STORAGE LENGTH IN CHRONIC KIDNEY DISEASE PATIENTS AT TEMPERATURE OF 20 - 25 ° C ON DIRECT BILIRUBIN LEVELS

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ABSTRACT

Background : Bilirubin direct should be done as soon as possible. The sample storage will be conducted because there is concern that there will be additional screening, making it impossible for the blood to be recovered. Blood sample storage should be in serum form. The resulting denaturing process can cause an increase or decline in color complex after the bilirubin levels in the serum are rehydrated by the reagent used, thus affecting the value of the bilirubin directional levels when reading is done.

Objective : to know the effects of the long storage of the serum of patients chronic kidney disease at temperatures of 20-25°C to direct bilirubin

Method : Examination of direct bilirubin levels in the serum of patients with chronic kidney disease who were stored at a temperature of 20-25 ° C was divided into 3 groups, namely the group examined immediately, examined after storing for 4 hours and after 8 hours. The study was carried out in November 2023 in clinical laboratory of RSUD Sleman Yogyakarta with a total of 40 respondents chronic kidney disease with patients with chronic kidney disease, with inclusion criteria, namely patients with stage 5 kidney chronic disease, routinely undergoing hemodialysis twice a week, HBsAg and HCV results were negative, and the sample there was not icteric, hemolysis and lipemic. Data analysis used the Friedman test and then posthoc test use Wilcoxon to know significant decrease between variable.

Results : the results of the study, on average, bilirubin levels of immediate examination were 0,21 mg/dl, averages of bilirubin 4 hours of storage is 0,20 mg/dl, and 8 hours of storage is 0,19 mg/dl. The results showed that there was effect of patients serum retention of chronic kidney disease at 20-25 ° C temperatures at a rate of bilirubin levels (p value = 0,000). The Wilcoxon posthoc test showed a decrease in direct bilirubin immediately and 4 hours storage (p value = 0,001) with 8 hour storage (p value=0,000) lampau

Conclusion : There is significant effect of storage patients serum of chronic kidney disease at 20-25 ° C temperatures on direct bilirubin.

Keywords : direct bilirubin, denaturate, storage

PENGARUH LAMA PENYIMPANAN SERUM PASIEN GAGAL GINJAL KRONIK PADA SUHU 20 – 25 ° C TERHADAP KADAR BILIRUBIN DIREK

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ABSTRAK

Latar Belakang : Pemeriksaan bilirubin direk harus di lakukan sesegera mungkin. Pada kondisi dilapangan biasanya dokter meminta tambahan pemeriksaan setelah beberapa jam. Pemeriksaan serum pasien gagal ginjal kronik setelah beberapa jam dapat meningkatkan atau menurunkan kadar bilirubin direk karena adanya proses denaturasi protein.

Tujuan : Untuk mengetahui pengaruh lama penyimpanan serum pasien gagal ginjal kronik pada suhu 20–25°C terhadap kadar bilirubin direk.

Metode : Pemeriksaan kadar bilirubin direk pada serum pasien gagal ginjal kronik yang di simpan pada suhu 20-25 ° C dibagi menjadi 3 kelompok, yaitu kelompok segera diperiksa, diperiksa setelah simpan 4 jam dan setelah 8 jam. Penelitian ini dilaksanakan pada bulan November 2023 di laboratorium kimia klinik RSUD Sleman Yogyakarta. Menggunakan 40 responden pasien gagal ginjal kronik dengan kriteria inklusi yaitu pasien gagal ginjal stadium 5, rutin menjalani hemodialisa 2 kali dalam seminggu, hasil HbsAg dan HCV negatif, dan sempel tidak ikterik, hemolisis dan lipemik. Analisis data menggunakan uji Friedmen yang kemudian dilanjutkan uji posthoc yaitu Wilcoxon.

Hasil : Hasil Penelitian didapatkan rata-rata kadar bilirubin direk pemeriksaan segera adalah 0,21 mg/dl penyimpanan 4 jam adalah 0,20 mg/dl dan penyimpanan 8 jam adalah 0,19 mg/dl. Hasil penelitian menunjukkan ada pengaruh lama penyimpanan serum pasien gagal ginjal kronik pada suhu 20–25 ° C terhadap kadar bilirubin direk (p value=0,000). Uji posthoc Wilcoxon menunjukkan adanya penurunan kadar bilirubin direk antara pemeriksaan segera dengan penyimpanan 4 jam sebesar (p value=0,001) dengan penyimpanan 8 jam sebesar (p value=0,000).

Kesimpulan : Ada pengaruh yang signifikan pada lama penyimpanan serum pasien gagal ginjal kronik pada suhu 20–25 ° C terhadap kadar bilirubin direk.

Kata Kunci : Bilirubin direk, Denaturasi, Penyimpanan sempel