ABSTRACK

Background: The storage of serum from chronic kidney disease patients is being carried out due to concerns about additional examination requests by doctors, one of which is the total bilirubin examination. In the pre-hemodialysis serum of chronic kidney disease patients, a toxin substance is present, namely Guanidine, where guanidine is a denaturant that produces a strong denaturation effect.
Objective: To determine the effect of total bilirubin levels in the serum of chronic kidney disease patients examined immediately, after being stored for 4 hours and 8 hours at a temperature of 20 - 25°C.
Methodology: The type of research used was pre-experimental with a one-group pretest-posttest research design. The study was conducted at RSUD Sleman Yogyakarta in November with a sample size of 40 samples. Inclusion criteria used included respondents suffering from stage five chronic kidney disease, samples without hemolysis, icterus, and lipemia, HbsAg and anti-HCV negative, and conducted before patients underwent hemodialysis. Data were tested using Repeated Measure ANOVA, then a normality test of the data was conducted, and the non-parametric results were tested using the Friedman test. To determine significant differences between times, a post hoc Wilcoxon test was conducted.
Results: The average total bilirubin levels in chronic kidney disease patients examined at a temperature of 20-25°C for 0 hours (immediate examination), 4 hours, and 8 hours were found to be 0.411 mg/dl, 0.377 mg/dl, and 0.362 mg/dl, respectively.
Conclusion: The research results indicate the effect of the duration of storage of serum from chronic kidney disease patients at a temperature of 20-25°C on the total bilirubin levels, as evidenced by a significance value sig>0,005.

Keywords: chronic kidney disease, guanidine, total bilirubin

ABSTRAK

Latar Belakang : Penyimpanan serum pasien gagal ginjal kronik dilakukan karena dikhawatirkan adanya permintaan pemeriksaan tambahan oleh dokter, salah satunya pemeriksaan bilirubin total. Serum pasien gagal ginjal kronik pre hemodialisa terdapat Subtansi *toxin* yaitu *Guanidine* dimana *guanidine* merupakan denaturant yang menghasilkan efek denaturasi yang kuat.
Tujuan Penelitian : Mengetahui pengaruh kadar bilirubin total pada serum pasien gagal ginjal kronik yang diperiksa segera, setelah disimpan selama 4 jam dan 8 jam pada suhu 20 - 25°C.
Metode Penelitian : Pemeriksaan kadar bilirubin total pada serum pasien gagal ginjal kronik yang disimpan selama 4 dan 8 jam pada suhu 20-25 ˚C. Serum dibagi menjadi 3 perlakuan yaitu pemeriksaan segera, 4 jam dan 8 jam. Jenis penelitian yang digunakan adalah pra eksperimen dengan desain penelitian *one group pretest posttest.* Penelitian dilakukan di RSUD Sleman Yogyakarta pada bulan November dengan jumlah sampel sebanyak 40 sampel. Kriteria inklusi yang digunakan antara lain responden menderita gagal ginjal kronik stadium lima, sampel tidak hemolisis, ikterik dan lipemik, HbsAg dan anti HCV negatif, serta dilakukan sebelum pasien menjalani hemodialisa. Data yang diuji menggunakan *Repeated Measure* ANOVA, lalu dilakukan uji normalitas data selanjutnya hasil non parametrik diuji menggunakan uji Friedman. Untuk mengetahui hasil signifikan antar waktu dilakukan uji *post hoc Wilxocon*.
Hasil Penelitian : didapatkan rerata kadar bilirubin total pada pasien Gagal ginjal kronik yang diperiksa pada suhu 20-25 ˚C selama 0 jam (pemeriksaan segera), 4 jam dan 8 jam berturut-turut sebesar 0,411 mg/dl, 0,377 mg/dl, dan 0,362 mg/dl.
Kesimpulan : Hasil penelitian didapatkan adanya pengaruh lama penyimpanan serum pasien Gagal ginjal kronik pada suhu 20-25 ˚C terhadap kadar Bilirubin total ditunjukkan dengan nilai sig>0,005
Kata Kunci : gagal ginjal kronik, *guanidine*, bilirubin total

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