

PERBEDAAN KADAR KREATININ PADA PASIEN  
HIPERKOLESTEROLEMIA YANG DISIMPAN 4 JAM DAN DISIMPAN 8  
JAM PADA SUHU 20°C-25°C DI RUMAH SAKIT PUSAT dr. SOERADJI  
TIRTONEGORO KLATEN

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ABSTAK

**Latar Belakang:** Dislipidemia adalah suatu abnormalitas metabolisme lipid yang mengakibatkan komplikasi seperti gagal ginjal kronik. Hiperkolesterolemia merupakan salah satu bentuk dislipidemia yaitu total kolesterol dalam darah yang tinggi yaitu  $\geq 200$  mg/dL. Tambahan pemeriksaan kreatinin dilakukan jika dicurigai adanya komplikasi pada ginjal. Kadar kreatinin tinggi berhubungan dengan abnormalitas ginjal. Kadar kreatinin biasanya diperiksa segera menggunakan sampel serum dalam waktu 1 jam setelah pengambilan sampel. Penyimpanan sampel yang tidak sesuai dengan prosedurnya akan menyebabkan ketidaklayakan sampel.

**Tujuan:** Mengetahui adanya perbedaan kadar kreatinin pada serum pasien hiperkolesterolemia yang diperiksa segera, disimpan 4 jam dan disimpan 8 jam pada suhu 20°C-25°C.

**Metode:** Jenis penelitian adalah *pre-Experimental design*, menggunakan sisa serum pasien hiperkolesterolemia (kadar kolesterol total  $>200$  mg/dL) di RSUP dr. Soeradji Tirtonegoro Klaten sebanyak 33 sampel selama 18 – 24 April 2024. Teknik yang digunakan adalah *sampling insidental (accidental sampling)*. Kadar kreatinin diukur dengan alat *Dimension EXL 200* dengan metode enzimatik. Data tidak berdistribusi normal, analisis hubungan menggunakan uji *Friedman* dengan  $p < 0,05$  (0,000) menunjukkan adanya perbedaan yang signifikan.

**Hasil:** Rerata kadar kreatinin pada serum yang segera diperiksa, setelah penyimpanan selama 4 jam dan 8 jam pada suhu 20-25°C adalah 1,18 mg/dL, 1,21 mg/dL dan 1,22 mg/dL. Hasil analisis deskriptif menunjukkan adanya kenaikan kadar kreatinin serum seiring dengan penyimpanan serum di suhu 20 - 25°C. Hasil analisis statistik non parametrik *Friedman* menunjukkan adanya perbedaan yang signifikan dengan nilai 0,000 ( $p < 0,05$ ).

**Kesimpulan:** Ada perbedaan kadar serum kreatinin pada serum pasien hiperkolesterolemia yang diperiksa segera, disimpan 4 jam dan disimpan 8 jam pada suhu 20°C-25°C.

**Kata kunci:** Kadar Kreatinin, serum pasien hiperkolesterolemia, waktu penyimpanan

DIFFERENCE OF CREATININE LEVEL IN HYPERCHOLESTEROLEMIA  
PATIENTS STORED 4 HOURS AND 8 HOURS IN TEMPERATURE OF  
20°C-25°C AT THE dr. SOERADJI TIRTONEGORO KLATEN HOSPITAL

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ABSTRACT

**Background:** Dyslipidemia is an abnormality of lipid metabolism that results in complications such as chronic renal failure. Hypercholesterolemia is a form of dyslipidemia where the total cholesterol in the blood is high at  $\geq 200$  mg/dL. Additional creatinine testing is done if kidney complications are suspected. High creatinine levels are associated with renal abnormalities. Creatinine levels are usually checked immediately using serum samples within 1 hour of sample collection. Storage of samples that are not in accordance with the procedure will lead to sample ineligibility.

**Objective:** Determine the difference in creatinine levels in serum of hypercholesterolemia patients examined immediately, stored 4 hours and stored 8 hours at 20°C-25°C.

**Methods:** This type of research is a pre-Experimental design, using the remaining serum of hypercholesterolemia patients (total cholesterol level  $>200$  mg/dL) at dr. Soeradji Tirtonegoro Klaten Hospital as many as 33 samples during 18 - 24 April 2024. The technique used was accidental sampling. Creatinine levels were measured by Dimension EXL 200 with enzymatic method. Data were not normally distributed, relationship analysis using Friedman test with  $p < 0.05$  (0.000) showed a significant difference.

**Result:** The result creatinine levels in serum examined immediately, after storage for 4 hours and 8 hours at 20-25 °C were 1.18 mg/dL, 1.21 mg/dL and 1.22 mg/dL. The results of descriptive analysis showed an increase in serum creatinine levels along with serum storage at 20-25 °C. The results of Friedman's non-parametric statistical analysis showed a significant difference with a value of 0.000 ( $p < 0.05$ ).

**Conclusion:** There are differences in serum creatinine levels in the serum of hypercholesterolemia patients examined immediately, stored 4 hours and stored 8 hours at 20°C-25°C.

**Keywords:** Creatinine levels, serum of hypercholesterolemia patients, storage time