ABSTRACT

Background: High levels of cholesterol in a person's body can cause cardiovascular disease, so checking total cholesterol levels is routinely done. The examination of total cholesterol levels uses serum which must be checked immediately. Improper serum storage will affect the test results.
Objective: To determine whether serum stored in serum separator tubes for 7 days at 2-8°C can be used for total cholesterol level examination.
Methods: This type of research is pre-experimental. 40 samples were used and divided into 2 treatments, namely immediately checked and stored for 7 days at a temperature of 2-8°C. Data processing was carried out with the Paired Sample T-test statistical test
Result: Descriptive test results obtained an average difference value of 12.4 mg/dL. The statistical test results obtained a value of $\rho = 0.000$ which means that there is a difference in the average total cholesterol levels examined immediately and stored for 7 days at a temperature of 2-8°C. While the relative bias percent value up to 7 days of storage is still in the ± 10% value range.
Conclusion: There is a difference in the average total cholesterol levels that are immediately checked and stored for 7 days at 2-8°C. However, the difference is not clinically significant so that at 7 days storage at 2-8°C it is still permissible to check total cholesterol levels.

Keywords: Total Cholesterol, Storage, Temperature, Serum Separator Tube

ABSTRAK

Latar Belakang: Tingginya kadar kolesterol dalam tubuh seseorang dapat menyebabkan penyakit kardiovaskular sehingga pemeriksaan kadar kolesterol total rutin dilakukan. Pemeriksaan kadar kolesterol total menggunakan serum yang harus segera diperiksa. Penyimpanan serum yang tidak tepat akan mempengaruhi hasil pemeriksaan.
Tujuan: Mengetahui serum yang disimpan dalam serum separator tube selama 7 hari pada suhu 2-8°C boleh digunakan untuk pemeriksaan kadar kolesterol total.
Metode: Jenis penelitian ini adalah pra eksperimen. Sampel yang digunakan 40 sampel dan dibagi 2 perlakuan, yaitu segera diperiksa dan disimpan selama 7 hari pada suhu 2-8°C. Pengolahan data dilakukan dengan uji statistik *Paired Sample T-test*
Hasil: Hasil uji deskriptif didapatkan nilai selisih rata-rata 12,4 mg/dL. Hasil uji statistik didapatkan nilai $\rho = 0{,}000$ yang artinya terdapat perbedaan rata-rata kadar kolesterol total yang diperiksa segera dan disimpan selama 7 hari pada suhu 2-8°C. Sedangkan nilai persen bias relative sampai dengan penyimpanan 7 hari masih masuk rentang nilai ± 10%.
Kesimpulan: Terdapat perbedaan rata-rata kadar kolesterol total yang segera diperiksa dan disimpan selama 7 hari pada suhu 2-8°C. Namun perbedaan tersebut tidak bermakna secara klinis sehingga pada penyimpanan 7 hari pada suhu 2-8°C masih diperbolehkan untuk dilakukan pemeriksaan kadar kolesterol total.

Kata kunci: Kolesterol Total, Penyimpanan, Suhu, Serum Separator Tube