

ABSTRACT

Background: Total cholesterol level examination is an examination to determine the level of fat in the blood. Cholesterol level examination uses serum samples. Storage of serum samples is carried out due to delays in examination. Improper storage of serum samples can affect the test results.

Objective: To determine the difference in total cholesterol levels in serum immediately examined, stored at 2-8°C and stored frozen in the freezer for 3 days.

Methods: This type of research is pre-experimental design. The samples in the study were 30 and grouped into 3 treatments, namely immediately, stored at 2-8°C and stored frozen in the freezer. The data obtained were analyzed by statistical tests of data normality test and Friedman test.

Results: The average results of total cholesterol levels immediately examined by stored at 2-8°C and immediately examined by stored frozen in the freezer for 3 days obtained an average difference of 22.13 mg/dl and 1.7 mg/dl, respectively. The statistical test results obtained a value of $p = 0.000$ which indicates that there are differences in cholesterol levels immediately checked and stored for 3 days at a temperature of 2-8°C and stored frozen in the freezer.

Conclusion: There is a difference in total cholesterol levels in serum that is immediately checked, stored at 2-8°C and stored frozen in the freezer for 3 days.

Keywords: Total cholesterol, temperature, storage

ABSTRAK

Latar Belakang: Pemeriksaan kadar kolesterol total adalah pemeriksaan untuk mengetahui kadar lemak dalam darah. Pemeriksaan kadar kolesterol menggunakan sampel serum. Penyimpanan sampel serum dilakukan karena terjadi penundaan pemeriksaan. Penyimpanan sampel serum yang tidak tepat dapat mempengaruhi hasil pemeriksaan.

Tujuan: Mengetahui ada perbedaan kadar kolesterol total pada serum segera diperiksa, disimpan pada suhu 2-8°C dan disimpan beku di dalam *freezer* selama 3 hari.

Metode: Jenis penelitian adalah *pre-experimental design*. Sampel pada penelitian sebanyak 30 dan dikelompokkan menjadi 3 perlakuan, yaitu segera, disimpan suhu 2-8°C dan disimpan beku di dalam *freezer*. Data yang diperoleh dianalisis dengan uji statistik uji normalitas data dan uji *friedman*.

Hasil: Hasil rerata kadar kolesterol total segera diperiksa dengan disimpan suhu 2-8°C dan segera diperiksa dengan disimpan beku di dalam *freezer* selama 3 hari didapatkan selisih rata-rata secara berturut-turut adalah 22,13 mg/dl dan 1,7 mg/dl. Hasil uji statistik didapatkan nilai $p = 0,000$ yang menunjukkan bahwa terdapat perbedaan kadar kolesterol segera diperiksa dan disimpan selama 3 hari pada suhu 2-8°C dan disimpan beku di dalam *freezer*.

Kesimpulan: Terdapat perbedaan kadar kolesterol total pada serum yang segera diperiksa, disimpan pada suhu 2-8°C dan disimpan beku di dalam *freezer* selama 3 hari.

Kata Kunci: Kolesterol total, suhu, penyimpanan