

ABSTRACT

Background: Measurement of cholesterol levels is a vital component of lipid profile testing in clinical laboratories. Ideally, cholesterol measurements should be conducted immediately after serum collection to ensure accurate results. Serum can be stored for up to 7 days at 2-8°C to accommodate additional requests or delays, however storage may influence cholesterol test outcomes.

Objective: To identify the differences in cholesterol levels between immediately tested serum and serum stored for 7 days at 2-8°C in acute coronary syndrome patients.

Method: This research employed a Pre-Experimental Design (non-design). A total of 45 samples were analyzed through two measurements. The first group was tested immediately after serum collection, and the second group was analyzed after storing the serum for 7 days at 2-8°C. Total cholesterol levels were determined using the CHOD-PAP method and data analysis was performed to identify changes in cholesterol levels.

Results: The average cholesterol level of immediately tested samples was 137.6, while for samples stored for 7 days, it was 154.9. Results showed a significant difference in cholesterol levels based on storage duration ($p=0.010$).

Conclusion: There is a measurable difference in cholesterol levels between serum tested immediately and serum stored for 7 days at 2-8°C in patients with acute coronary syndrome.

Keywords: cholesterol, serum storage, acute coronary syndrome

ABSTRAK

Latar Belakang: Pemeriksaan kadar kolesterol adalah bagian penting dari profil lipid yang umum dilakukan di laboratorium klinik. Pengukuran kolesterol sebaiknya dilakukan segera setelah serum diperoleh untuk memastikan akurasi hasil. Serum dapat disimpan hingga 7 hari pada suhu 2-8°C untuk mengantisipasi permintaan tambahan, namun penyimpanan serum berpotensi memengaruhi hasil pemeriksaan kolesterol.

Tujuan: Mengetahui perbedaan kadar kolesterol pada serum yang segera diperiksa dengan yang disimpan selama 7 hari pada suhu 2-8°C pada pasien sindrom koroner akut.

Metode: Penelitian ini menggunakan desain Pra-Eksperimental. Sebanyak 45 sampel digunakan dengan dua kali pengukuran kadar kolesterol. Kelompok pertama dianalisis segera setelah serum diambil, sementara kelompok kedua diperiksa setelah serum disimpan 7 hari pada suhu 2-8°C. Pemeriksaan kadar kolesterol total dilakukan menggunakan metode CHOD-PAP dan data hasil pengukuran dianalisis untuk mengetahui adanya penurunan kadar kolesterol.

Hasil: Rata-rata kadar kolesterol pada sampel yang segera diperiksa adalah 137,6, sedangkan yang disimpan selama 7 hari adalah 154,9. Analisis menunjukkan perbedaan signifikan pada hasil berdasarkan waktu penyimpanan serum ($p=0,010$).

Kesimpulan: Terdapat perbedaan kadar kolesterol antara serum yang diuji langsung dengan serum yang disimpan selama 7 hari pada suhu 2-8°C pada pasien sindrom koroner akut.

Kata Kunci: kolesterol, penyimpanan serum, sindrom koroner akut