

## ABSTRACT

DIFFERENCES IN CHOLESTEROL LEVELS IN THE SERUM OF HYPERTENSION PATIENTS WERE EXAMINED IMMEDIATELY, AFTER STORING FOR 4 AND 8 HOURS AT 20-25°C

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**Background:** According to World Health Organization data in 2022, an estimated 1.28 billion adults aged 30-79 years worldwide suffer from hypertension. Increased cholesterol levels are experienced by many people with hypertension. Accurate laboratory examination results depend on all stages including pre-analytical, analytical, and post-analytical. The pre-analytical stage accounts for the largest error of 60% -70%. In daily practice in the field, there are many cases of delays in sample examination caused by many factors and the reuse of existing samples when results are missed, so that the results produced do not reflect the actual levels.

**Method:** The type of research used is pre-experimental design. The research design is a group Pretest Posttest Design. The research was carried out in October 2023. The subjects of this research were hypertensive patients who underwent routine examinations at the Gondokusuman 2 Community Health Center with a total of 40 respondents. Data analysis used Repeated Measure ANOVA

**Result:** The mean serum cholesterol levels of hypertensive patients who were examined immediately, and stored for 4 and 8 hours at a temperature of 20-25°C were 196,1mg/dl, 200,3mg/dl, and 204,6mg/dl. The sig results in the Repeated Measure ANOVA test show Sig Greenhouse-Geisser (0.000) <0.005.

**Conclusion:** There are differences in cholesterol levels in the serum of hypertensive patients who were examined immediately, and stored for 4 and 8 hours at a temperature of 20-25°C.

**Key Words:** Serum of hypertension patients, Cholesterol, Delay of testing

## ABSTRAK

### PERBEDAAN KADAR KOLESTEROL PADA SERUM PASIEN HIPERTENSI YANG DIPERIKSA SEGERA, SETELAH DISIMPAN 4 DAN 8 JAM PADA SUHU 20-25°C

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**Latar Belakang:** Menurut data *World Health Organisation* tahun 2022, diperkirakan 1.28 miliar orang dewasa berusia 30-79 tahun diseluruh dunia menderita hipertensi. Peningkatan kadar kolesterol banyak dialami oleh penderita hipertensi. Hasil pemeriksaan laboratorium yang akurat bergantung pada semua tahapan yang mencakup pra analitik, analitik, dan pasca analitik. Pada tahap pra analitik menyumbang kesalahan terbesar sebesar 60%-70%. Pada praktek sehari-hari yang terjadi di lapangan banyak ditemukan kasus penundaan pemeriksaan sampel yang diakibatkan oleh banyak faktor dan penggunaan kembali sampel yang telah ada ketika hasil terlewat dikerjakan, sehingga hasil yang dikeluarkan tidak mencerminkan kadar yang sesungguhnya.

**Metode:** Jenis penelitian yang digunakan yaitu *pre ekperimental design*. Desain penelitian adalah *One Group Pretest Posttest Design*. Penelitian dilaksanakan pada bulan Oktober 2023. Subjek penelitian ini adalah pasien hipertensi yang menjalani pemeriksaan rutin di Puskesmas Gondokusuman 2 dengan jumlah 40 responden. Analisis data menggunakan *Repeated Measure ANOVA*

**Hasil:** Rerata kadar kolesterol serum pasien hipertensi yang diperiksa segera, disimpan selama 4 dan 8 jam pada suhu 20-25°C sebesar 196,1mg/dl, 200,3mg/dl, dan 204,6mg/dl. Hasil sig pada uji *Repeated Measure ANOVA* menunjukkan Sig *Greenhouse-Geisser* (0.000)<0.005.

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

**Kata kunci:** Serum pasien hipertensi, Kolesterol, Penundaan