PERBEDAAN KADAR KOLESTEROL TOTAL PADA PERLAKUAN PEMINDAHAN SAMPEL DARAH TANPA DAN DENGAN MELEPAS JARUM SPUIT

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ABSTRAK

Latar Belakang: Tahap pra-analitik merupakan faktor penting yang mempengaruhi hasil pemeriksaan laboratorium. Salah satu kesalahan yang sering terjadi adalah teknik pemindahan sampel darah yang tidak sesuai prosedur, seperti pemindahan tanpa melepas jarum spuit dan disemprotkan, berpotensi menyebabkan hemolisis. Kondisi sampel yang hemolisis dapat mengganggu hasil pemeriksaan kimia darah, termasuk kadar kolesterol total.

Tujuan Penelitian: Mengetahui perbedaan kolesterol total pada perlakuan pemindahan sampel darah tanpa dan dengan melepas jarum spuit, serta rerata kadar kolesterol total pada perlakuan pemindahan sampel darah tanpa dan dengan melepas jarum spuit.

Metode: Jenis penelitian yang digunakan observasional analitik dengan pendekatan *cross sectional.* Pengambilan 30 sampel secara *Purposive Random Sampling* dari mahasiswa Teknologi Laboratorium Medis semester 3. Sampel dibagi menjadi dua kelompok, kelompok kontrol menggunakan teknik pemindahkan sampel darah dengan melepas jarum dan kelompok perlakuan tanpa melepas jarum spuit. Data dianalisis dengan uji *Independen Sample t-Test* menggunakan SPSS.

Hasil: Rerata kadar kolesterol total pada perlakuan tanpa melepas jarum sebesar 141.40 mg/dL sedangkan dengan melepas jarum sebesar 126. 97 mg/dL. Hasil uji statistik menunjukkan nilai signifikansi 0,032 ($p<0,05$), yang berarti terdapat perbedaan yang bermakna secara statistik antara kedua perlakuan. Kadar kolesterol total pada perlakuan pemindahan sampel darah tanpa melepas jarum spuit mengalami peningkatan sebesar 11.37%.

Kesimpulan: Terdapat perbedaan signifikan kadar kolesterol pada perlakuan pemindahan sampel darah tanpa dan dengan melepas jarum spuit. Oleh karena itu, teknik pemindahan sampel darah yang sesuai prosedur perlu diperhatikan untuk mencegah hemolisis dan menjaga keakuratan hasil pemeriksaan.

Kata Kunci: Kolesterol total, hemolisis, spuit, spektrofotometer, pra-analitik

COMPARISON OF TOTAL CHOLESTEROL LEVELS IN BLOOD SAMPLES TRANSFERRED WITHOUT AND WITH NEEDLE DETACHMENT FROM THE SYRINGE

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ABSTRACT

Backgorund: The pre-analytical phase is a key factor influencing laboratory test results. One common error is improper blood sample transfer techniques, such as transferring the sample without removing the syringe needle or spraying it, which can cause hemolysis. Hemolyzed blood samples can interfere with blood chemistry test results, including total cholesterol levels.

Research Objective: This study aimed to determine the difference in total cholesterol levels between blood sample transfer without and with removing the syringe needle, as well as to compare the mean total cholesterol levels between both treatments.

Research Methods: This study employed an analytical observational design with a cross-sectional approach. A total of 30 samples were collected through purposive random sampling from third-semester Medical Laboratory Technology program. The samples were divided into two groups: needle-removal and non-needle-removal. Data were analyzed using the independent samples t-test with SPSS.

Research Result: The mean total cholesterol level in the group that underwent the needle removal procedure was 126.97 mg/dL, whereas in the group that did not undergo the procedure it was 141.40 mg/dL. Statistical analysis showed a p-value of 0.032 ($p<0.05$), indicating a statistically significant difference between the two groups. Total cholesterol levels in the group that did not undergo the needle removal procedure increased by 11.37%

Conclusion: There is a significant difference in total cholesterol levels between blood sample transfer with and without syringe needle removal. Therefore, proper sample handling techniques should be applied to prevent hemolysis and ensure accurate laboratory results.

Keywords: Total cholesterol, hemolysis, syringe, spectrophotometer, pre-analytical