

ABSTRAK

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KORELASI KADAR KOLESTEROL TOTAL DENGAN JUMLAH SEL MONONUKLEAR (LIMFOSIT DAN MONOSIT) PADA PASIEN LANSIA DI PUSKESMAS SIDOSERMO SURABAYA TAHUN 2024

1x + 82 Halaman + 11 Tabel + 13 Lampiran

Kolesterol merupakan penyakit gangguan metabolik. Meningkatnya kadar kolesterol total dalam darah dapat menimbulkan aterosklerosis. Aterosklerosis merupakan kondisi penyempitan dan pengerasan pada pembuluh darah. Kondisi ini dapat menyebabkan penyakit jantung dan stroke. Kolesterol tinggi dapat meningkatkan sekresi sitokin proinflamasi, yang akan mengaktifkan sel-sel inflamasi seperti makrofag, limfosit, dan monosit. Makrofag adalah penanda paling akurat dari reaksi inflamasi pada kolesterol tinggi. Tujuan penelitian ini adalah untuk mengetahui apakah ada atau tidak korelasi kadar kolesterol total dengan jumlah sel mononuklear (limfosit dan monosit) pada pasien lansia di Puskesmas Sidosermo Surabaya.

Penelitian ini menggunakan metode observasi analitik dan pendekatan cross-sectional. yang dilakukan pada Januari-Februari 2024 dan didapatkan sebanyak 30 sampel penelitian yang memenuhi kriteria inklusi. Metode pemeriksaan kadar kolesterol total menggunakan metode *CHOD-PAP* dan pemeriksaan jumlah sel mononuklear dengan metode *impedance flow cytometry*.

Hasil penelitian mendapatkan hasil rata rata kolesterol total 165 mg/dL, rata jumlah limfosit yaitu 30,8 % , dan rata rata jumlah monosit yaitu 7,4 %. Berdasarkan hasil uji statistik uji korelasi *spearman* menunjukkan bahwa terdapat korelasi antara kadar kolesterol total dengan jumlah sel limfosit dengan nilai $p = 0,001 (< 0,01)$, berkorelasi positif dengan tingkat korelasi sedang yang ditunjukkan nilai $r = 0,584$. Kadar kolesterol total dengan jumlah sel monosit didapatkan nilai $p = 0,002 (< 0,01)$, berkorelasi positif dengan tingkat korelasi sedang yang ditunjukkan nilai $r = 0,544$.

Kata kunci: kolesterol total, sel mononuklear, lansia.

ABSTRACT

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CORRELATION OF TOTAL CHOLESTEROL LEVELS WITH THE NUMBER OF MONONUCLEAR CELLS (LYMPHOCYTES AND MONOCYTES) IN ELDERLY PATIENTS AT SIDOSERMO COMMUNITY HEALTH CENTER SURABAYA IN 2024

1x + 82 Pages + 11 Tables + 13 Attachments

Cholesterol is a metabolic disorder. Increasing total cholesterol levels in the blood can cause atherosclerosis. Atherosclerosis is a condition of narrowing and hardening of the blood vessels. This condition can cause heart disease and stroke. High cholesterol can increase the secretion of pro-inflammatory cytokines, which will activate inflammatory cells such as macrophages, lymphocytes and monocytes. Macrophages are the most accurate marker of the inflammatory reaction in high cholesterol.

The aim of this study was to determine whether or not there was a correlation between total cholesterol levels and the number of mononuclear cells (lymphocytes and monocytes) in elderly patients at the Sidosermo Community Health Center, Surabaya. This research uses analytical observation methods and a cross-sectional approach. which was conducted in January-February 2024 and obtained 30 research samples that met the inclusion criteria. The method for examining total cholesterol levels uses the CHOD-PAP method and examining the number of mononuclear cells using the impedance flow cytometry method.

The results of the study showed that the average total cholesterol was 165 mg/dL, the average number of lymphocytes was 30.8%, and the average number of monocytes was 7.4%. Based on the statistical test results, the Spearman correlation test shows that there is a correlation between total cholesterol levels and the number of lymphocyte cells with a value of $p = 0.001$ (< 0.01), a positive correlation with a moderate level of correlation as indicated by the value of $r = 0.584$. The total cholesterol level and the number of monocyte cells obtained a value of $p = 0.002$ (< 0.01), positively correlated with a moderate level of correlation shown by the value of $r = 0.544$.

Key words: total cholesterol, mononuclear cells, elderly.