

ABSTRAK
Hubungan Kadar HbA1c dan LDL pada Pasien
Diabetes Melitus dengan Kadar Gula Terkontrol Di Prodia Kemang

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Diabetes melitus merupakan penyakit metabolik kronis yang ditandai oleh hiperglikemia persisten dan sering disertai gangguan metabolisme lipid, terutama peningkatan kadar low density lipoprotein (LDL) yang berisiko terhadap penyakit kardiovaskular. Hemoglobin terglikasi (HbA1c) digunakan sebagai indikator kontrol glikemik jangka panjang, namun hubungannya dengan profil lipid pada pasien dengan kontrol gula darah yang baik masih memerlukan kajian lebih lanjut. Penelitian ini bertujuan mengetahui hubungan antara kadar HbA1c dengan kadar LDL pada pasien diabetes melitus dengan kadar gula terkontrol di Laboratorium Klinik Prodia Kemang. Penelitian ini menggunakan desain observasional analitik dengan pendekatan cross-sectional, memanfaatkan data sekunder hasil pemeriksaan laboratorium periode Oktober-Desember 2025. Sampel berjumlah 135 responden dipilih menggunakan teknik purposive sampling berdasarkan kriteria inklusi dan eksklusi. Analisis hubungan antar variabel menggunakan uji korelasi Spearman karena data tidak berdistribusi normal. Hasil penelitian menunjukkan rata-rata kadar HbA1c sebesar 6,710 plus minus 0,168 persen (rentang 6,50-7,00 persen) dan rata-rata kadar LDL sebesar 134,18 plus minus 40,739 mg/dL (rentang 59-221 mg/dL), termasuk kategori borderline high. Uji korelasi Spearman menunjukkan koefisien korelasi -0,013 dengan nilai signifikansi 0,880 (p lebih besar 0,05), yang berarti tidak terdapat hubungan bermakna secara statistik antara kadar HbA1c dengan kadar LDL. Temuan ini mengindikasikan bahwa pada rentang kontrol glikemik yang baik, kadar LDL lebih dipengaruhi oleh faktor lain seperti pola makan, aktivitas fisik, dan penggunaan obat penurun lipid, sehingga pemantauan profil lipid perlu dilakukan secara mandiri, tidak hanya mengandalkan nilai HbA1c.

Kata kunci: HbA1c, LDL, diabetes melitus, korelasi Spearman, kadar gula terkontrol

ABSTRACT
Correlation Between HbA1c and LDL Levels in Controlled Diabetes Mellitus Patients at Prodia Kemang

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Diabetes mellitus is a chronic metabolic disease characterized by persistent hyperglycemia and is often accompanied by lipid metabolism disorders, particularly elevated low density lipoprotein (LDL) levels that increase cardiovascular disease risk. Glycated hemoglobin (HbA1c) is widely used as an indicator of long-term glycemic control, yet its relationship with lipid profile in patients with well-controlled blood glucose remains unclear. This study aimed to determine the relationship between HbA1c levels and LDL levels in diabetes mellitus patients with controlled blood glucose at Prodia Kemang Clinical Laboratory. This study employed an analytical observational design with a cross-sectional approach, using secondary data from laboratory examinations conducted between October and December 2025. A total of 135 respondents were selected through purposive sampling based on inclusion and exclusion criteria. The relationship between variables was analyzed using the Spearman correlation test, as the data were not normally distributed. The results showed a mean HbA1c level of 6.710 plus minus 0.168 percent (range 6.50-7.00 percent) and a mean LDL level of 134.18 plus minus 40.739 mg/dL (range 59-221 mg/dL), falling within the borderline high category. The Spearman correlation test yielded a correlation coefficient of -0.013 with a significance value of 0.880 (p greater than 0.05), indicating no statistically significant relationship between HbA1c and LDL levels. These findings suggest that within a well-controlled glycemic range, LDL levels are more strongly influenced by other factors such as diet, physical activity, and lipid-lowering medication use, highlighting the importance of independent lipid profile monitoring rather than relying solely on HbA1c values.

Keywords: HbA1c, LDL, diabetes mellitus, Spearman correlation, controlled blood glucose