

**POLITEKNIK KESEHATAN TANJUNGPINANG  
JURUSAN TEKNOLOGI LABORATORIUM MEDIS  
PROGRAM STUDI TEKNOLOGI LABORATORIUM MEDIS  
PROGRAM SARJANA TERAPAN**

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**Hubungan Kadar HbA1c dengan Kadar Kolesterol HDL dan LDL pada  
Penderita Diabetes Mellitus Tipe 2 di RSD dr. A. Dadi Tjokrodipo**

xvi + 28 halaman, 8 tabel, 4 gambar, dan 21 lampiran

**ABSTRAK**

Diabetes Mellitus Tipe 2 (DMT2) adalah penyakit metabolik yang ditandai dengan kadar gula darah tinggi akibat gangguan produksi atau efektivitas insulin. Pemeriksaan HbA1c menunjukkan kadar gula darah rata-rata selama 2-3 bulan terakhir. Pemeriksaan kadar kolesterol HDL dan LDL adalah indikator lipid yang berpengaruh terhadap risiko komplikasi kardiovaskular pada penderita diabetes. Tujuan penelitian ini untuk mengetahui hubungan antara kadar HbA1c dengan kadar kolesterol HDL dan LDL pada penderita DMT2 di RSD dr. A. Dadi Tjokrodipo. Dan penelitian ini juga bertujuan khusus untuk mengetahui distribusi kadar HbA1c, HDL, dan LDL pada pasien tersebut. Penelitian ini menggunakan desain *cross-sectional* dengan melibatkan 35 responden yang memenuhi kriteria inklusi. Hasil penelitian menunjukkan bahwa rata-rata kadar HbA1c adalah 9,1% (terendah 5,3%, tertinggi 14,0%). Rata-rata kadar kolesterol HDL 49,05mg/dL (terendah 25,6mg/dL, tertinggi 84,4mg/dL). Rata-rata kadar kolesterol LDL 133mg/dL (terendah 64mg/dL, tertinggi 242mg/dL). Uji statistik Spearman Rank menunjukkan tidak ada hubungan signifikan antara kadar HbA1c dengan kadar kolesterol HDL ( $p\text{-value } 0,129 > 0,05$ ; koefisien korelasi -0,262) maupun antara kadar HbA1c dengan kadar kolesterol LDL ( $p\text{-value } 0,326 > 0,05$ ; koefisien korelasi 0,171).

Kata kunci: Diabetes Mellitus Tipe 2, HbA1c, Kolesterol HDL dan LDL, Kontrol Glikemik

Daftar Bacaan: 30 (2010 – 2023)

**TANJUNKARANG HEALTH POLYTECHNIC  
MEDICAL LABORATORY TECHNOLOGY STUDY PROGRAM  
APPLIED UNDERGRADUATE PROGRAM**

Thesis, July 2025

Dinda Aprilia Putri

**Relationship Between HbA1c Levels and HDL and LDL Cholesterol Levels in Patients with Type 2 Diabetes Mellitus at RSD dr.A. Dadi Tjokrodipo**

xvi + 28 pages, 8 tables, 4 pictures, dan 21 attachments

**ABSTRACT**

Type 2 Diabetes Mellitus (T2DM) is a metabolic disorder characterized by high blood sugar levels due to impaired insulin production or effectiveness. The HbA1c test reflects the average blood sugar level over the past 2–3 months. HDL and LDL cholesterol levels are lipid indicators that influence the risk of cardiovascular complications in diabetes patients. The aim of this study was to determine the relationship between HbA1c levels and HDL and LDL cholesterol levels in T2DM patients at Dr. A. Dadi Tjokrodipo General Hospital. Additionally, this study specifically aimed to determine the distribution of HbA1c, HDL, and LDL levels in these patients. This study used a cross-sectional design involving 35 respondents who met the inclusion criteria. The results showed that the average HbA1c level was 9.1% (lowest 5.3%, highest 14.0%). The average HDL cholesterol level was 49.05 mg/dL (lowest 25.6 mg/dL, highest 84.4 mg/dL). The average LDL cholesterol level was 133 mg/dL (lowest 64 mg/dL, highest 242 mg/dL). The Spearman Rank statistical test showed no significant relationship between HbA1c levels and HDL cholesterol levels ( $p\text{-value } 0.129 > 0.05$ ; correlation coefficient -0.262) or between HbA1c levels and LDL cholesterol levels ( $p\text{-value } 0.326 > 0.05$ ; correlation coefficient 0.171).

Keywords: Type 2 Diabetes Mellitus, HbA1c, HDL and LDL Cholesterol.

Reading List: 30 (2010 – 20