

## ABSTRAK

Perbedaan Kadar Apolipoprotein A1 dan Apolipoprotein B  
pada Pasien Diabetes Melitus Tipe 2 dengan Retinopati Diabetika  
dan Tanpa Retinopati Diabetika  
di RSUP Dr. Sardjito Yogyakarta

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**Tujuan:** Untuk mengetahui perbedaan kadar apolipoprotein A1 dan apolipoprotein B pada pasien diabetes melitus tipe 2 dengan retinopati diabetika dan tanpa retinopati diabetika

**Metode:** Penelitian ini menggunakan desain potong lintang. Subjek penelitian ini adalah pasien DM tipe 2 dengan retinopati diabetika dan tanpa retinopati diabetika di RSUP dr. Sardjito bulan Juli hingga September 2020. Subyek terdiri atas 32 pasien pada kelompok dengan retinopati diabetika dan 31 pasien tanpa retinopati diabetika. Kadar apolipoprotein A1 dan apolipoprotein B dianalisis menggunakan uji T tidak berpasangan. Faktor-faktor yang mempengaruhi apolipoprotein A1 dan apolipoprotein B dianalisis menggunakan uji regresi linier.

**Hasil:** Rerata usia pada kelompok retinopati diabetika  $54,5 \pm 6,72$  tahun sedangkan pada kelompok tanpa retinopati diabetika didapatkan rerata usia  $57,35 \pm 7,48$  tahun ( $p = 0,134$ ). Tidak didapatkan perbedaan yang bermakna ( $p > 0,05$ ) pada usia, jenis kelamin, durasi DM, HDL, trigliserid, HbA1c, IMT, aktivitas fisik, dan riwayat merokok. Rerata kadar LDL  $162,5 \pm 48,38$  mmol/l pada kelompok retinopati diabetika dan  $127 \pm 38,45$  mmol/l pada kelompok tanpa retinopati diabetika ( $p = 0,012$ ). Rerata kadar apolipoprotein B pada kelompok retinopati diabetika  $1,26 \pm 0,289$  mg/dl lebih tinggi daripada kelompok tanpa retinopati diabetika  $1,01 \pm 0,26$  mg/dl dan bermakna signifikan ( $p = 0,001$ ).

**Kesimpulan:** Kadar apolipoprotein B lebih tinggi pada kelompok dengan retinopati diabetika daripada kelompok tanpa retinopati diabetika dan keduanya terdapat perbedaan yang signifikan.

Kata kunci: *Diabetes Melitus Tipe 2, Apolipoprotein A1, Apolipoprotein B, Retinopati Diabetika*

## ABSTRACT

Differences of Apolipoprotein A1 and Apolipoprotein B Levels in  
Type 2 Diabetes Mellitus Patients with Diabetic Retinopathy and  
Without Diabetic Retinopathy  
at Dr. Sardjito Hospital Yogyakarta

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**Objective:** To determine the differences in levels of apolipoprotein A1 and apolipoprotein B in type 2 diabetes mellitus with diabetic retinopathy and without diabetic retinopathy patients.

**Methods:** This study used a cross-sectional design. The subjects of this study was patients with type 2 diabetes mellitus with diabetic retinopathy and without diabetic retinopathy at Dr. Sardjito from July to September 2020. Subjects consisted of 32 with diabetic retinopathy patients and 31 without diabetic retinopathy patients. The levels of apolipoprotein A1 and apolipoprotein B were analyzed using an unpaired T-test. The factors affecting apolipoprotein A1 and apolipoprotein B were analyzed using linier regression tests.

**Results:** The mean age in the diabetic retinopathy group was  $54.5 \pm 6.72$  years, while in the without diabetic retinopathy group the mean age was  $57.35 \pm 7.48$  years ( $p = 0.134$ ). There were no significant differences ( $p > 0.05$ ) in age, gender, duration of diabetes, HDL, triglycerides, HbA1c, BMI, physical activity, and smoking history. Mean LDL levels was  $162.5 \pm 48.38$  mmol/L in the diabetic retinopathy group and  $127 \pm 38.45$  mmol/L in the without diabetic retinopathy group ( $p = 0.012$ ). The mean level of apolipoprotein B in the diabetic retinopathy group was  $1.26 \pm 0.289$  mg/dL higher than the non-diabetic retinopathy group  $1.01 \pm 0.26$  mg/dL and was significant ( $p = 0.001$ ).

**Conclusion:** Apolipoprotein B levels was higher in the group with diabetic retinopathy than in the group without diabetic retinopathy and there was significant differences between the two.

Keywords: Type 2 Diabetes Mellitus, Apolipoprotein A1, Apolipoprotein B, Diabetic Retinopathy