

ABSTRACT

CORRELATION BETWEEN HBA1C AND ANKLE–BRACHIAL INDEX (ABI) SCORES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS PARTICIPATING IN THE CHRONIC DISEASE MANAGEMENT PROGRAM (PROLANIS) AT KEDATON PUBLIC HEALTH CENTER

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Background: Type 2 diabetes mellitus is a chronic disease with a continuously increasing prevalence and is associated with a high risk of macrovascular complications, including Peripheral Arterial Disease (PAD). Chronic hyperglycemia in patients with type 2 diabetes mellitus can be assessed through glycated hemoglobin (HbA1c) measurement, while PAD can be detected simply and non-invasively using the Ankle Brachial Index (ABI).

Methods: This study was an analytical observational study with a cross-sectional design. A total of 54 patients with type 2 diabetes mellitus who were members of Prolanis at Kedaton Primary Health Center and met the inclusion and exclusion criteria were enrolled. HbA1c data were obtained from medical records, while ABI values were measured directly. Data were analyzed using univariate and bivariate analyses with Spearman's correlation test.

Results: The bivariate analysis demonstrated a statistically significant negative correlation between HbA1c levels and ABI values ($r = -0.335$; $p = 0.013$).

Conclusions: There was a significant negative correlation between HbA1c levels and ABI values among patients with type 2 diabetes mellitus enrolled in the Prolanis program at Kedaton Primary Health Center. These findings highlight the importance of optimal glycemic control in preventing macrovascular complications in patients with type 2 diabetes mellitus.

Keywords: Ankle Brachial Index, HbA1c, Peripheral Arterial Disease, Prolanis, Type 2 Diabetes Mellitus

ABSTRAK

KORELASI HbA1c DENGAN SKOR ANKLE BRACHIAL INDEX (ABI) PADA PASIEN DIABETES MELITUS TIPE II ANGGOTA PROGRAM PENGELOLAAN PENYAKIT KRONIS (PROLANIS) DI PUSKESMAS KEDATON

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Latar Belakang: Diabetes Melitus tipe II merupakan penyakit kronis dengan prevalensi yang terus meningkat dan berisiko menimbulkan komplikasi makrovaskular, salah satunya penyakit arteri perifer. Hiperglikemia kronis pada pasien DM tipe II dapat dievaluasi melalui pemeriksaan HbA1c, sedangkan PAD dapat dideteksi secara sederhana dan non-invasif menggunakan *Ankle Brachial Index* (ABI).

Metode: Penelitian ini merupakan penelitian analitik observasional dengan desain *cross-sectional*. Sampel penelitian berjumlah 54 pasien DM tipe II anggota Prolanis di Puskesmas Kedaton yang memenuhi kriteria inklusi dan eksklusi. Data HbA1c diperoleh dari rekam medis, sedangkan nilai ABI diukur secara langsung. Analisis data dilakukan secara univariat dan bivariat dengan uji korelasi Spearman

Hasil: Hasil analisis bivariat menunjukkan terdapat korelasi negatif yang bermakna antara kadar HbA1c dengan nilai ABI ($r = -0,335$; $p = 0,013$).

Kesimpulan: Terdapat korelasi negatif yang signifikan antara kadar HbA1c dan nilai ABI pada pasien DM tipe II anggota Prolanis di Puskesmas Kedaton. Temuan ini menegaskan pentingnya pengendalian glikemik yang optimal dalam upaya pencegahan komplikasi makrovaskular pada pasien DM tipe II.

Kata Kunci: *Ankle Brachial Index*, Diabetes Melitus tipe II, HbA1c, *Peripheral Arterial Disease*, Prolanis