Hubungan Total Asupan Serat, Serat Larut Air, dan Serat Tidak Larut Air dengan Kadar HbA1c Pra Lansia Penyandang Diabetes Mellitus Tipe 2 di Kota Semarang pada Masa Pandemi Covid-19

Fajar Tri Rahayu[1], Etika Ratna Noer[1], Ayu Rahadiyanti[1]

ABSTRAK

Latar belakang: Diabetes mellitus tipe 2 merupakan salah satu faktor penyebab terjadinya lonjakan keparahan covid-19 dengan kondisi kadar glukosa yang tidak terkontrol. Asupan serat larut air dan tidak larut air diduga dapat menurunkan kadar glukosa darah pada diabetes mellitus tipe 2.
Tujuan: Menganalisis hubungan total asupan serat, serat larut air, dan serat tidak larut air dengan kadar HbA1c pra lansia penyandang diabetes mellitus tipe 2 di kota Semarang pada masa pandemi covid-19.
Metode: Penelitian ini menggunakan desain *cross-sectional* dengan 58 subjek berusia 45-65 tahun penyandang DM tipe 2 yang berpartisipasi dalam prolanis dan dipilih secara *purposive sampling.* Data asupan dan aktivitas fisik diambil dengan wawancara menggunakan kuesioner SQ-FFQ dan PAL. Data HbA1c didapatkan dengan pemeriksaan darah vena menggunakan metode imuno turbidimetri dengan *Indiko Clinical Chemistry Analyzer.* Analisis data dilakukan dengan uji korelasi *Spearman's Rank.*
Hasil: Rerata asupan serat subjek tergolong defisit yaitu 13,7 gram/hari. Tingkat aktivitas fisik subjek sebanyak 33 orang (56,9%) termasuk kategori ringan. Hasil pemeriksaan menunjukkan sebanyak 39 subjek (67,2%) memiliki kadar HbA1c yang tinggi. Hasil uji bivariat menunjukkan tidak terdapat hubungan antara total asupan serat, serat larut air, dan serat tidak larut air dengan kadar HbA1c.
Kesimpulan: Tidak terdapat hubungan total asupan serat, serat larut air, dan serat tidak larut air dengan kadar HbA1c pra lansia penyandang diabetes mellitus tipe 2.
Kata kunci: serat pangan, serat larut air, serat tidak larut air, HbA1c, diabetes mellitus tipe 2

[1]Program Studi Gizi, Fakultas Kedokteran, Universitas Diponegoro, Semarang

Correlation of Total Intake of Fiber, Soluble Fiber, and Insoluble Fiber with HbA1c Levels of Pre-Elderly People with Type 2 Diabetes Mellitus in Semarang during the Covid-19 Pandemic

Fajar Tri Rahayu[1], Etika Ratna Noer[1], Ayu Rahadiyanti[1]

ABSTRACT

Background: Diabetes mellitus is one of the factors causing a surge in the severity of covid-19 with uncontrolled glucose levels. Soluble fiber and insoluble fiber might has a positive effect on blood glucose levels in people with type 2 diabetes mellitus.

Objective: To analyze the correlation of total intake of fiber, soluble fiber, and insoluble fiber with HbA1c levels of pre-elderly people with type 2 diabetes mellitus in Semarang during the covid-19 pandemic.

Methods: This study used a cross-sectional design with 58 subjects aged 45-65 years with type 2 diabetes mellitus who participated in prolanis and selected by purposive sampling. Nutrition intake and physical activity data were taken by interviewing subjects with SQ-FFQ and PAL questionnaires. HbA1c data was obtained by examining venous blood using the immunoturbidimetric method. Data were analyzed using Spearman's Rank test.

Results: The mean fiber intake of the subjects was categorid as deficient 13.7 g/day. The subjects level of physical activity showed that 33 subjects (56.9%) were included in the low activity level. The results showed that 39 subjects (67.2%) had uncontrolled HbA1c levels. The results of the bivariate test showed that there was no correlation of between total fiber intake, soluble fiber, insoluble fiber and HbA1c levels.

Conclusion: There is no correlation of total intake of fiber, soluble fiber, and insoluble fiber with HbA1c in pre-elderly people with type 2 diabetes mellitus

Keywords: dietary fiber, soluble fiber, insoluble fiber, HbA1c, type 2 diabetes mellitus

[1]Nutrition Science Department, Medical Faculty of Diponegoro University, Semarang