

HUBUNGAN KADAR GULA DARAH, POLA KONSUMSI SUMBER LEMAK DAN SERAT DENGAN KADAR TRIGLISERIDA DAN KADAR KOLESTEROL PADA PASIEN DIABETES MELITUS

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Hubungan Kadar Gula Darah, Pola Konsumsi Sumber Lemak Dan Serat Dengan Kadar Trigliserida Dan Kadar Kolesterol Pada Pasien Diabetes Melitus

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ABSTRAK

Latar Belakang : Gula darah dan pola konsumsi sumber lemak dan serat dapat mempengaruhi terjadinya dislipidemia pada penderita diabetes melitus. Suatu studi dilaporkan bahwa dengan meningkatkan konsumsi serat 30 – 40 gr/hr dan mengurangi konsumsi lemak (< 30 % dari total energi) dapat menurunkan kadar trigliserida dan kolesterol. Penelitian ini bertujuan untuk mengetahui hubungan antara kadar gula darah, pola konsumsi sumber lemak dan serat dengan kadar trigliserida dan kadar kolesterol pada pasien diabetes mellitus.

Metode : Desain penelitian adalah *cross sectional* dengan jumlah sampel 37 orang yang baru didiagnosa diabetes di klinik rawat jalan rumah sakit Dr. Kariadi Semarang. Pola konsumsi sumber lemak dan serat diperoleh dengan menggunakan *food frequency questionnaire* (FFQ) semi kuantitatif . Data kadar gula darah, trigliserida dan kolesterol diperoleh dari buku status pasien dengan kadar normal untuk gula darah puasa 76 – 140 mg/dl, kadar gula darah 2 jpp 80 – 140 mg/dl, kadar trigiserida dan kolesterol 50 – 200 mg/dl. Analisis univariat dan bivariat digunakan untuk mengetahui hubungan antara gula darah, pola konsumsi sumber lemak dan serat dengan kadar trigliserida dan kolesterol.

Hasil : Kadar gula darah puasa berhubungan dengan kadar kolesterol ($r = 0,33$; $p = 0,04$). Asupan lemak jenuh berhubungan dengan kadar trigliserida ($r = - 0,32$; $p = 0,04$). Kadar gula darah puasa, kadar gula darah 2 jpp, frekuensi konsumsi sumber lemak, asupan lemak total, asupan lemak tak jenuh ganda, asupan kolesterol, frekuensi konsumsi sumber serat dan asupan serat tidak ada hubungan dengan kadar trigliserida ($r = 0,15$; $p = 0,35$, $r = 0,204$; $p = 0,22$, $r = 0,09$; $p = 0,56$, $r = - 0,27$; $p = 0,105$, $r = - 0,184$; $p = 0,27$, $r = - 0,2$; $p = 0,23$, $r = 0,09$; $p = 0,595$, $r = - 0,139$; $p = 0,41$). Kadar gula darah 2 jpp, frekuensi konsumsi sumber lemak, asupan lemak total, asupan lemak jenuh, asupan lemak tak jenuh ganda, asupan kolesterol, frekuensi konsumsi sumber serat dan asupan serat tidak ada hubungan dengan kadar kolesterol ($r = 0,03$; $p = 0,83$, $r = - 0,23$; $p = 0,901$, $r = - 0,27$; $p = 0,09$, $r = - 0,255$; $p = 0,127$, $r = - 0,23$; $p = 0,16$, $r = 0,011$; $p = 0,94$, $r = 0,026$; $p = 0,877$, $r = - 0,71$; $p = 0,67$). Tidak adanya hubungan ini menunjukkan masih ada faktor lain yang mempengaruhi kadar trigliserida dan kolesterol, misalnya aktifitas fisik, merokok, tingkat pendidikan, riwayat keluarga diabetes dan jantung, serta BMI (*Body Mass Index*)

Kesimpulan: Terdapat hubungan antara kadar gula darah puasa dengan kadar kolesterol, asupan lemak jenuh dengan kadar trigliserida dan tidak terdapat hubungan antara kadar gula darah 2 jpp, frekuensi konsumsi sumber lemak, asupan lemak total, asupan lemak tak jenuh ganda, asupan kolesterol, frekuensi konsumsi sumber serat dan asupan serat dengan kadar trigliserida dan kolesterol.

Kata Kunci : Kadar gula darah, pola konsumsi sumber lemak dan serat , kadar trigliserida,kadar kolesterol.

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The Association Between Plasma Glucose, Dietary Fat and Fibre Sources and Triglycerides and Cholesterol In Patients With Diabetes Mellitus

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Abstract

Introduction : Plasma glucose and dietary fat and fibre sources may associated with dislipidemia in patients with diabetes melitus. A study in human reported that incresed dietary fiber 30 – 40 gr/day and lowered overall intake of dietary fat (< 30 % energy total) can reduce tryglycerides and cholesterol (Suyono, 2002). This study examines the association between plasma glucose, dietary fat and fibre sources and tryglycerides and cholesterol in patients with diabetes mellitus.

Methods : A cross sectional study was conducted on 37 new diagnosed diabetes patients in outpatient clinic in dr. Kariadi Hospital. A semi quantitative food frequency questionnaire (FFQ) was used to measure usual dietary fat and fibre sources. Plasma glucose, tryglycerides and cholesterol concentration were obtained from medical records with normal concentration of fasting plasma glucose between 76 – 140 mg/dl, plasma glucose 2 hours post prandial 80 – 140 mg/dl, tryglycerides and cholesterol 50 – 200 mg/dl. Univariate and bivariate analyses were conducted to examine the association between plasma glucose, dietary fat and fibre sources and tryglycerides and cholesterol.

Result : Fasting plasma glucose associated with cholesterol concentrations ($r = 0,33$; $p = 0,04$), saturated fat associated with tryglycerides ($r = - 0,32$; $p = 0,04$). Fasting plasma glucose, plasma glucose 2 hours post prandial, the food sources of fat consumption frequencies score, total fat consumption, polyunsaturated fatty acid consumption, cholesterol consumption, the food sources of fibre consumption frequencies score and fibre consumption not associated with tryglycerides ($r = 0,15$; $p = 0,35$, $r = 0,204$; $p = 0,22$, $r = 0,09$; $p = 0,56$, $r = - 0,27$; $p = 0,105$, $r = - 0,184$; $p = 0,27$, $r = - 0,2$; $p = 0,23$, $r = 0,09$; $p = 0,595$, $r = - 0,139$; $p = 0,41$). Plasma glucose 2 hours post prandial, the food sources of fat consumption frequencies score, total fat consumption, saturated fat, polyunsaturated fatty acid consumption, cholesterol consumption, the food sources of fibre consumption frequencies score and fibre consumption not associated with cholesterols ($r = 0,03$; $p = 0,83$, $r = - 0,23$; $p = 0,901$, $r = - 0,27$; $p = 0,09$, $r = - 0,255$; $p = 0,127$, $r = - 0,23$; $p = 0,16$, $r = 0,011$; $p = 0,94$, $r = 0,026$; $p = 0,877$, $r = - 0,71$; $p = 0,67$). There were the other factors such as activity , smoking, education, diabetes and heart disease family histories , and BMI (*Body Mass Index*) associated with tryglyserides and cholesterol.

Conclusion : There were association between fasting plasma glucose with cholesterol , saturated fat consumption with tryglycerides, and there were not association between plasma glucose 2 hours post prandial, the food sources of fat consumption frequencies score, total fat consumption, polyunsaturated fatty acid consumption, cholesterol consumption, the food sources of fibre consumption frequencies score and fibre consumption not associated with tryglycerides and cholesterol.

Keyword : Plasma Glucose, Dietary Fat and Fibre Sources , Tryglycerides and Cholesterol Consentration.

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