KADAR LDL-KOLESTEROL DARAH PADA TIKUS PUTIH DIABETIK INDUKSI ALLOXAN SETELAH PEMBERIAN CAMPURAN BAWANG PUTIH (*ALLIUM SATIVUM* L) DAN SIRIH (*PIPER BETLE* L)

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INTISARI

Pendahuluan: Diabetes terjadi pada banyak populasi di dunia, dan prevalensinya meningkat sangat cepat. Banyak komplikasi yang disebabkan karena efek sekunder dari hiperkolesterolemia.

Tujuan: Penelitian ini untuk mengetahui pengaruh pemberian campuran bawang putih dan sirih terhadap kadar LDL pada Diabetes Melitus tipe II.

Subyek dan Desain Penelitian: *Pre-test, post-test controlled group design.* Menggunakan 15 tikus (strain *Wistar*), dibagi dalam 3 kelompok. Kontrol positif (dengan glibenklamid; 0,1 mg/200gr BB), kontrol negatif (tanpa perlakuan), dan kelompok uji (pemberian secara oral bawang putih dan sirih; 180 mg/200gr BB dan 15 mg/200gr BB), selama 10 hari pada tikus diabetik, kemudian kadar LDL kolesterol diukur.

Hasil: Pada perlakuan dengan glibenklamid, kadar LDL turun dari 71.72 ± 1.59 mg/dL menjadi 30.06 ± 2.03 mg/dL (p=0.00). Dengan bawang putih dan sirih, kadar LDL turun dari 70.20 ± 3.03 mg/dL menjadi 37.45 ± 2.09 mg/dL (p=0.00). Pada kelompok kontrol negatif terjadi peningkatan kadar LDL yang signifikan dari 68.45 ± 2.72 mg/dL menjadi 70.33 ± 2.03 mg/dL (p=0.038).

Simpulan: Bawang putih dan sirih secara segnifikan menurunkan kadar LDL-kolesterol. Tanaman ini dapat dipertimbangkan untuk pengobatan alternatif DM

Kata Kunci: bawang putih – diabetes melitus – LDL – sirih

THE LDL-CHOLESTEROL LEVELS ON ALLOXAN-INDUCED DIABETIC RATS GIVEN GARLIC (*ALLIUM* SATIVUM) AND PIPERACEAE (*PIPER* BETLE)

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ABSTRACT

Background: *Diabetes affect a large segment of the population worlwide, and the prevalence of this disease is rapidly increasing. Many complications caused by secondary effect of hypercholesterolemia.*
Objective: *To find out the effect of Garlic and P. betle to LDL-Cholesterol (LDL-C) on Diabetes Melitus type-II.*
Subjects and Methods: *Pre-test, post-test controlled group design. Fiveteen rats (Wistar strain), devided into 3 groups. Positive control (given glibenclamide; 0.1 mg/200gr of body w), negative contro (without treatment), and experiment group (oral administration of garlic and P. betle; 180 mg/200gr of body w and 15 mg/200gr of body w, for 10 days on LDL-C in alloxan-induced diabetics rats were evaluated.*
Results: *The baseline LDL-C level of 71.72 ± 1.59 mg/dL was reduced to 30.06 ± 2.03 mg/dL after 10 days of glibenclamide treatment (p=0.00). By garlic and P. betle, LDL-C level of 70.20 ± 3.03 mg/dL was reduced to 37.45 ± 2.09 mg/dL (p=0.00). In negative control showed significant increased LDL-C level of 68.45 ± 2.72 mg/dL to 70.33 ± 2.03 mg/dL (p=0.038).*
Conclusions: *The effect of garlic and P. betle produced a significantly reduction in LDL-C. The plant must be considered as an alternative treatment of DM*

Keywords: *diabetes melitus – garlic – LDL - piper betle*