

ABSTRAK

Rochma, Siti. 2014. *Efek Ekstrak Daun Binahong terhadap Kadar Glukosa Darah dan Profil Lipid Pada Tikus DM Tipe 2*. Tugas Akhir, Program Studi Farmasi Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Dra. Diana Lyrawati, Apt. M.S., Ph.D. (2) Dra. S.J. Iswarin, M.Si., Apt.

Kondisi hiperglikemia pada diabetes mellitus, walaupun kadar glukosa darah tinggi, namun glukosa tidak dapat masuk ke dalam sel, sehingga meningkatkan terjadinya lipolisis yang dapat menyebabkan terjadinya hiperlipidemia. Penelitian ini bertujuan untuk melihat efek ekstrak daun binahong terhadap kadar glukosa darah dan profil lipid pada tikus putih strain wistar model Diabetes Mellitus tipe 2. Terapi yang diberikan ekstrak daun binahong dosis 17,5 mg/kgBB/hari (PA), 35 mg/kgBB/hari (PB), 70 mg/kgBB/hari (PC) dan glimepiride 1,08 mg/kgBB/hari (KP). Glukosa darah puasa diukur pada sebelum dan setelah terapi. Profil glukosa darah selama 10 jam diamati pada hari 1, 7, dan 14 terapi. Profil lipid diukur saat setelah terapi dengan metode *enzymatic colorimetric test*. Terapi dengan ekstrak binahong atau glimepiride selama 2 minggu menunjukkan efek menguntungkan pada kadar glukosa darah puasa ($p = 0,011$), penurunan paling banyak pada kelompok PB. Ekstrak binahong dosis 35 mg/kgBB/hari (PB) dapat mencapai kadar glukosa darah 100 mg/dL saat 10 jam setelah terapi tetapi tidak pada glimepiride. Profil lipid kelompok PA dan PC mengalami penurunan, namun secara statistik tidak bermakna (kolesterol total $p = 0,339$, trigliserida $p = 0,414$, kolesterol HDL $p = 0,158$, dan kolesterol LDL $p = 0,367$). Kesimpulan dari penelitian ini, binahong sebagai antidiabetes oral lebih baik daripada glimepiride dalam mengontrol glukosa darah tetapi tidak mempengaruhi profil lipid tikus.

Kata kunci: DM tipe 2, ekstrak daun binahong, kadar glukosa darah, profil glukosa darah, profil lipid.

ABSTRACT

Rochma, Siti. 2014. *Effect of Binahong Leaves Extract on Blood Glucose Levels and Lipid Profiles in Type 2 DM Rats*. Final Assignment, Pharmacy Program, Faculty of Medicine, Brawijaya University. Supervisors: (1) Dra. Diana Lyrawati, Apt. M.S., Ph.D. (2) Dra. S.J. Iswarin, M.Si., Apt.

Conditions of hyperglycemia in diabetes mellitus, although the blood glucose levels is high, but glucose can not enter the cells, so that increasing the lipolysis that can cause hyperlipidemia. This study aimed to examine the effects binahong leaves extract on blood glucose levels and lipid profiles in white rat wistar strain with type 2 diabetes mellitus model. Treatment that given binahong leaves extract dose of 17.5 mg/kgBW/day (PA), 35 mg/kgBW/day (PB), 70 mg/kgBW/day (PC) and glimepiride 1.08 mg/kgBW/day (KP). Fasting blood glucose was measured before and after treatment. Blood glucose profiles were observed for 10 hours on day 1, 7, and 14 treatment. Lipid levels were measured after treatment with enzymatic colorimetric test methods. Treatment with binahong extract or glimepiride for 2 weeks showed beneficial effects on fasting blood glucose levels ($p = 0.011$), decreased most good in PB group. Binahong extract 35 mg/kgBW/day (PB) can achieved blood glucose levels 100 mg/dL at 10 hour post treatment but not glimepiride. Lipid levels in PA and PC groups have decreased, but statistically not different (total cholesterol $p = 0.339$, triglycerides $p = 0.414$, HDL-cholesterol $p = 0.158$, and LDL-cholesterol $p = 0.367$). The conclusion of this study that binahong as oral antidiabetic is better than glimepiride in controlling blood glucose but did not affect the lipid levels rat.

Keywords: Type 2 DM, binahong leaves extract, blood glucose levels, blood glucose profiles, lipid profiles.