

ABSTRAK

Gunawan, Yasinta K K. 2014. **Efek Ekstrak Daun Binahong (*Anredera cordifolia*) terhadap Kadar Glikogen Hati Tikus Wistar Model DM Tipe 2.** Tugas Akhir, Program Studi Farmasi Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Dra. Diana Lyrawati, Apt.,M.S., Ph.D. (2) Dra. Siti Jazimah Iswarin, Apt, M.Si

Pada kondisi DM 2 terjadi resistensi insulin yang menyebabkan penurunan dari aktivitas sintesis glikogen. Daun binahong merupakan tanaman herbal yang dapat digunakan sebagai agen antidiabetes. Tujuan penelitian ialah mengetahui efek ekstrak daun binahong terhadap kadar glukosa darah dan kadar glikogen hati. Metode penelitian menggunakan *true experimental pre and post control group design* secara *in vivo*. Sampel tikus wistar berjumlah 30 ekor dibagi menjadi enam kelompok perlakuan yaitu tikus normal (K-), tikus DM2 (K+), tikus DM2 dan terapi binahong dengan dosis 17,5 mg/kgBB/hari (PA), 35 mg/kgBB/hari (PB), dan 70 mg/kgBB/hari (PC), serta tikus DM2 dan terapi glimepiride per hari sebagai obat standard antidiabetes (KP). Kadar glukosa darah puasa diukur pada H1, H7, H14, dan H15 masa terapi. Kadar glikogen hati diukur pada akhir masa terapi menggunakan spektrofotometri. Hasil penelitian menunjukkan kematian tikus DM2 tertinggi pada kelompok PA. Kadar glukosa darah kelompok PB mencapai kadar glukosa normal <200 mg/dL dan berbeda bermakna dibanding K+ ($p=0,043$). Mula kerja terapi binahong yaitu 2 jam setelah pemberian. Tidak ada perbedaan bermakna dan nilai korelasi negatif antara dosis binahong dan kadar glikogen hati ($p=-0,415$; $p=0,233$). Kesimpulan penelitian ialah pemberian binahong dosis 35 mg/kgBB/hari dapat menurunkan kadar glukosa darah dan tidak ada efek pada kadar glikogen hati tikus model DM Tipe 2.

Kata kunci: binahong, DM Tipe 2, glukosa darah puasa, glikogen hati,

ABSTRACT

Gunawan, Yasinta K K. 2014. **Effect of Binahong Leaves Extracts (*Anredera cordifolia*) on Hepatic Glycogen Levels DM 2 Rats**. Final Assignment, Pharmacy Program, Faculty of Medicine, University of Brawijaya. Supervisors: (1) Dra. Diana Lyrawati, Apt.,M.S., Ph.D. (2) Dra. Siti Jazimah Iswarin, Apt, M.Si

DM type 2 is characterized by insulin resistance that decreases activity of glycogen synthesis. Binahong leaves are herbal used as an antidiabetic agent. The aim of this research were to determine effect of binahong leaves extract on blood glucose and hepatic glycogen levels. In vivo true experimental pre and post control group design was used in this study. Thirty male wistar strain rats were assigned into six groups, i.e. normal (K-); DM2 induced (K +); DM2 induced treated with different dosages of binahong leaves extract: 17.5 mg/kgBW/day (PA); 35 mg/kgBW/day (PB); 70 mg/kgBW/day (PC); and DM2 induced treated with glimepiride per day as an antidiabetic drugs standard (KP). Fasting blood glucose levels were measured on D1, D7, D14, and D15 treatment periods. Hepatic glycogen levels were measured at the end of therapy period by spectrophotometer assays. The highest mortality was in PA group. Decreased levels of fasting blood glucose in PB group was significant compared K+ group ($p=0.043$) and reached normal level $<200\text{mg/dL}$. Onset of binahong is 2 hours after administration. There were no statistically differences and negative correlation between dosages of binahong and hepatic glycogen levels ($p=-0.415$; $p = 0.233$). The conclusion of this study are binahong leaves extract was effective at 35 mg/kgBW/day to decrease blood glucose levels and no effect on hepatic glycogen levels in DM2 rats.

Keywords: binahong, DM type 2, blood glucose, hepatic glycogen