

ABSTRAK

Pengobatan diabetes melitus (DM) cukup kompleks, sehingga diperlukan alternatif terapi untuk penderita diabetes. Alternatif pengobatan yang bisa digunakan adalah tanaman obat tradisional. Salah satu tanaman obat tradisional yang dapat digunakan sebagai obat antidiabetes adalah belimbing wuluh yang mengandung flavonoid dan saponin sebagai zat antidiabetik. Tujuan penelitian ini untuk menilai efek pemberian infusa buah belimbing wuluh dalam menurunkan glukosa darah puasa (GDP) dan 2 jam *post prandial* (2PP).

Penelitian yang telah dilakukan bersifat eksperimental dengan rancangan acak lengkap terhadap 28 ekor mencit galur Swiss Webster yang terbagi 4 kelompok: kelompok I (pakan standar, aloksan, akar bosa 0,13 mg), kelompok II, III dan IV (pakan standar, aloksan, infusa buah belimbing wuluh 0,252 g/ 20 g BB, 0,504 g/ 20 g BB, dan 0,756 g/ 20 g BB). Pengukuran dilakukan setelah masa adaptasi, setelah induksi aloksan dan setelah 7 hari perlakuan.

Hasil penelitian setelah dilakukan uji Anava dengan nilai signifikan < 0.05 ($0.017 < 0.05$), sehingga menunjukkan bahwa infusa buah belimbing wuluh dosis 0,252 g/ 20 g BB, 0,504 g/ 20 g BB, dan 0,756 g/ 20 g BB menurunkan kadar GDP dan 2PP secara signifikan. Uji lanjut Anava yaitu uji Duncan menunjukkan bahwa Infusa buah belimbing wuluh dosis 0,756 g/ 20 g BB dapat menurunkan glukosa darah sebesar 123,33 sehingga merupakan dosis efektif dalam menurunkan kadar GDP dan 2PP. Kesimpulan penelitian menunjukkan bahwa infusa buah belimbing wuluh dapat menurunkan kadar GDP dan 2PP.

Kata kunci: Diabetes melitus, Infusa buah belimbing wuluh, Glukosa darah puasa, Glukosa darah 2 jam *post prandial*

ABSTRACT

Treatments of diabetes mellitus (DM) is quite complex, thus requiring an alternative therapy for the patients with diabetes. Alternative treatments that can be used is a traditional medicinal plant. One of the traditional medicinal plants that can be used as antidiabetic drugs is Averrhoa bilimbi which contains flavonoids and saponins as an antidiabetic agent. The purpose of this research is to assess the effect of Averrhoa bilimbi fruit infusion in lowering fasting blood glucose (GDP) and 2-hour post-prandial (2PP).

The research that has been conducted is an experimental study with a completely randomized design on 28 strains of Swiss Webster mice which were divided into 4 groups: group I (standard feed, alloxan, akarbosa 0.13 mg), group II, III and IV (standard feed, alloxan, Averrhoa bilimbi fruit infusion 0.252 g / 20 g of body weight, 0.504 g / 20 g of body weight, and 0.756 g / 20 g of body weight). The measurements were made after a period of adaptation, after alloxan induction and after 7 days of treatment.

The research results after the Anova test with the significant value < 0.05 ($0.017 < 0.05$), thus showing that Averrhoa bilimbi fruit infusion with the dose of 0.252 g / 20 g of body weight, 0.504 g / 20 g of body weight, and 0.756 g / 20 g of body weight lower the levels of GDP and 2PP significantly. The further Anova test namely Duncan test showed that Averrhoa bilimbi fruit infusion lower the levels of blood glucose equal to 123.33. So that Averrhoa bilimbi fruit infusion with the dose of 0.756 g / 20 g of body weight is the effective dose in lowering the levels of GDP and 2PP. The research conclusion showed that Averrhoa bilimbi fruit infusion can reduce the levels of GDP and 2PP.

Keywords: Diabetes Mellitus, Averrhoa bilimbi fruit infusion, Fasting Blood Glucose, 2-Hour Post-Prandial Blood Glucose