

INTISARI

Hiperkolesterolemia merupakan keadaan dimana terjadi peningkatan kadar kolesterol diatas normal. Hiperkolesterolemia merupakan risiko penyakit aterosklerosis, jantung, stroke, dan diabetes mellitus. Flavonoid yang terkandung didalam infusa umbi bawang dayak memiliki aktivitas penghambatan enzim HMG-KoA reduktase sehingga terjadi penurunan kadar kolesterol. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian infusa umbi bawang dayak (*Eleutherine bulbosa* (Mill.) Urb.) terhadap penurunan kadar kolesterol total pada tikus diet tinggi lemak. Jenis penelitian ini adalah eksperimental murni dengan desain penelitian *pre-test and post-test control group design*. Sebanyak 25 tikus betina galur *Sprague Dawley* (SD) berumur 2-3 bulan dengan berat badan \pm 150-250 gram, dibagi acak dalam 5 kelompok. Kelompok I (kontrol negatif) diberi aquadest dosis 13,33 g/ kgBB. Kelompok II (kontrol positif) diberi campuran minyak babi dan kuning telur puyuh dosis adalah 3 g/150 gram BB . Kelompok III, IV, dan V diberikan infusa umbi bawang dayak dengan tiga peringkat dosis 0,34; 0,67; 1,33 g/kgBB. Semuanya perlakuan diberikan secara per oral. Pengukuran kadar kolesterol menggunakan darah tikus diambil pada hari ke-0 (*pre-test*) dan hari ke-30 (*post-test*). Data kadar kolesterol dianalisis menggunakan *Shapiro-Wilk* untuk melihat distribusi data dan *Paired T-test* untuk melihat signifikansi kadar kolesterol *pre* dan *post* kelompok kontrol, kemudian dilakukan uji *One Way ANOVA* dan dilanjutkan dengan uji *Pos Hoc Tukey* data kolesterol total *post-test* masing-masing kelompok perlakuan.

Hasil statistik menunjukkan adanya perbedaan yang bermakna antar kelompok perlakuan ($p < 0,05$). Hasil pengujian perbedaan antar kelompok menunjukkan perlakuan dosis 0,34g/kgBB; dosis 0,67 g/kgBB; dan dosis 1,33 g/kg BB menunjukkan hasil yang berbeda bermakna ($p < 0,05$) terhadap kontrol positif lemak 3 g/150 gramBB. Dosis 0,67 g/kgBB dan 1,33 g/kgBB menunjukkan hasil yang tidak berbeda bermakna ($p > 0,05$) terhadap kontrol negatif aquadest 13,33 g/kgBB. Kesimpulannya Infusa umbi bawang dayak memiliki kemampuan untuk menurunkan kolesterol total secara bermakna ($p < 0,05$)

Kata kunci : umbi bawang dayak, infusa, kolesterol total, hiperkolesterolemia

ABSTRACT

*Hypercholesterolemia is a condition where there is an increase in cholesterol levels above normal. Hypercholesterolemia is a risk of atherosclerosis, heart disease, stroke, and diabetes mellitus. The flavonoids contained in dayak infusion have HMG-CoA reductase enzyme inhibition activity in a decrease in cholesterol levels. This research aims to investigate the influence of dayak onion (*Eleutherine bulbosa* (Mill.) Urb) infusion towards to decrease total cholesterol level of high fat diet mice. The current research was purely experimental using pre-test and post-test control group design. As many as 25 female Sprague Dawley (SD) mice of the age range between 2-3 months with body weights of \pm 150-250 g were randomly divided into 5 groups. The mice in group 1 (negative control group) were given 13.33 mg/kgBW aquadest. The mice in group 2 (positive control group) were given the mixture of pork oil and quail egg yolk with a dose of 3 g/150 grBW. The mice in group III, IV, and V were infused with dayak onion with 3 different levels of dosages, 0.34 g/kgBW; 0.67 g/kgBW; and 1.33 g/kgBW, respectively. They were given orally to the mice. The measurement of cholesterol levels using the mice's blood was done on day 0 (pre-test) and day 30 (post-test). The data of cholesterol level were analyzed using the Shapiro-Wilk to see data distribution and Paired T-test to see the significance cholesterol level between the pre and the post of control group before they were tested using One Way ANOVA and Post Hoc Tukey total cholesterol data post-test for each treatment group.*

The statistic result showed that there was a significant difference among the treatment groups with ($p < 0,05$). The test of differences among groups revealed that dosage 0.34 g/kgBW; 0.67 g/kgBW ;and dosage 1.33 g/kgBW treatments gave significant similar result ($p < 0,05$) on the positive control group fat 3 g/150 gBW. The dose of 0.67 g / kgBW and 1.33 g / kgBB showed that were not significantly different result ($p > 0.05$) on the negative control aquadest 13.33 g / kgBW. In conclusion, dayak onion infusion was able to significantly reduce cholesterol level ($p < 0.05$).

Keywords : *dayak onion, infusion, cholesterol, hypercholesterolemia*