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PENGARUH EKSTRAK SEMANGGI AIR (*Marsilea crenata*) TERHADAP KADAR KOLESTEROL LDL dan HDL TIKUS PUTIH HIPERKOLESTEROLEMIA

ABSTRAK

Latar belakang: Peningkatan kadar kolesterol merupakan salah satu faktor risiko hipertensi, penyumbatan pembuluh darah di otak, dan jantung. Peningkatan kadar kolesterol dipengaruhi oleh faktor usia, aktivitas fisik, kebiasaan merokok, dan pola makan. Salah satu cara penurunan kadar kolesterol saat ini dikembangkan menggunakan herbal. Penelitian ini menggunakan sampel Semanggi Air (*Marsilea crenata*). Ekstrak daun semanggi air mengandung flavonoid dan steroid, diduga mampu menurunkan kadar kolesterol.

Tujuan: Menganalisis pengaruh ekstrak daun semanggi air terhadap kadar HDL dan LDL pada tikus putih hiperkolesterolemia yang diinduksi pakan tinggi lemak.

Metode: Penelitian eksperimental *pre and post testgroup design*, menggunakan 30 ekor tikus putih jantan, berat badan ± 200 gram, berumur 2 bulan, dibagi 5 kelompok secara *Random*. Kelompok normal, negatif (PTL), P1 (PTL+dosis 100), P2 (PTL+dosis 200), dan P3 (PTL+dosis 400) mg/kg BB. Data LDL dan HDL diuji ANOVA.

Hasil: Senyawa dalam ekstrak Semanggi Air (*Marsilea crenata*) dosis 400 mg/KgBB mampu menurunkan kadar LDL sebesar $(0,056 \pm 0,004)$ mg/dL, dan meningkatkan kadar HDL secara bermakna pada dosis 200 dan 400 mg/KgBB masing-masing sebesar $(65,1 \pm 4,55)$, sig: 0,012, dan $(71,28 \pm 0,39)$ mg/dL sig: 0,761.

Kesimpulan: Ekstrak Semanggi Air (*Marsilea crenata*) dosis 400 mg/KgBB memiliki kemampuan paling efektif dalam menurunkan kadar kolesterol LDL dan meningkatkan kadar kolesterol HDL.

Kata kunci: Semanggi Air, Kolesterol LDL, Kolesterol HDL

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EFFECT OF WATER CLOVER (*Marsilea crenata*) EXTRACT ON LDL AND HDL LEVELS IN DYSLIPIDEMIC RATS

ABSTRACT

Background: Increased cholesterol levels are one of the risk factors for hypertension, blockage of blood vessels in the brain, and heart. Increased cholesterol levels are influenced by age, physical activity, smoking habits, and eating patterns. One way to reduce cholesterol levels is currently being developed using herbs. This study uses a sample of Water clover (*Marsilea crenata*). Water clover leaf extract contains flavonoids and steroids, flavonoids are thought to be able to reduce cholesterol levels.

Objective: To analyze the effect of water clover leaf extract on HDL and LDL levels in dyslipidemic white rats induced by high fat diets..

Method: The design of this research is pre and post test group design, using 30 male white rats, body weight ± 200 grams, 2 months old, divided into 5 groups randomly. The normal, negative (high-fat feed), P1 (high-fat feed + dose 100) , P2 (high-fat feed + dose 200), and P3 (high-fat feed + dose 400) mg/kg BW. LDL and HDL data were tested for ANOVA.

Results: The compound in water clover leaf extract (*Marsilea crenata*) dose of 400 mg / kg BW significantly reduce LDL levels (0.056 ± 0.004) mg / dl, and can increase HDL levels at 200 doses each (65.1 ± 4.55), sig: 0.012, and 400 mg / kg BW (71.28 ± 0.39) mg / dl sig: 0.76.

Conclusion: Water Clover (*Marsilea crenata*) extract at a dose of 400 mg/KgBB has the most effective ability to reduce LDL cholesterol levels and increase HDL levels.

Keywords: Water clover, LDL cholesterol, HDL cholesterol, dyslipidemic