AKTIVITAS ANTIDISLIPIDEMIA EKSTRAK DAUN GIRANG (*Leea indica* (Burm.f.) *Merr.*) TERHADAP KADAR LDL (*LOW-DENSITY LIPOPROTEIN*) DAN HDL (*HIGH-DENSITY LIPOPROTEIN*) PADA TIKUS JANTAN WISTAR

IIS SITI LATIFAH MULQIAH
211FF03020

Program Studi S1 Farmasi, Fakultas Farmasi
Universitas Bhakti Kencana

ABSTRAK

Dislipidemia merupakan gangguan metabolisme lipid yang ditandai dengan peningkatan kadar LDL (Low-Density Lipoprotein) dan penurunan kadar HDL (High-Density Lipoprotein), yang menjadi faktor risiko utama penyakit kardiovaskular. Penggunaan obat penurun lipid seperti statin efektif, namun memiliki efek samping. Oleh karena itu, diperlukan alternatif terapi yang lebih aman, salah satunya menggunakan bahan alam. Tanaman Leea indica (daun girang) diketahui mengandung senyawa aktif seperti flavonoid, saponin, tanin, dan alkaloid yang berpotensi memperbaiki profil lipid. Penelitian ini bertujuan untuk mengetahui aktivitas antidislipidemia dan dosis efektif ekstrak daun girang terhadap kadar LDL dan HDL pada tikus jantan galur Wistar. Penelitian dilakukan secara in vivo dengan menggunakan 30 ekor tikus yang dibagi menjadi enam kelompok, termasuk kontrol normal, kontrol induksi, pembanding (simvastatin), dan tiga kelompok perlakuan ekstrak daun girang (dosis 50, 100, dan 200 mg/kgBB). Tikus diinduksi dislipidemia menggunakan diet tinggi lemak, karbohidrat, dan fruktosa selama 28 hari. Pemeriksaan kadar LDL dan HDL dilakukan menggunakan alat Microlab 300. Hasil penelitian menunjukkan bahwa ekstrak daun girang mampu menurunkan kadar LDL dan meningkatkan kadar HDL secara signifikan ($p<0,05$) dibanding kelompok induksi. Dosis 100 mg/kgBB menunjukkan efek paling optimal dan setara dengan simvastatin. Efek ini diduga karena kandungan flavonoid yang menghambat enzim HMG-CoA reduktase serta meningkatkan ekspresi protein yang terlibat dalam pembentukan HDL. Kesimpulannya, ekstrak daun girang memiliki potensi sebagai agen antidislipidemia alami, dan dosis 100 mg/kgBB merupakan dosis efektif yang sebanding dengan simvastatin.

Kata Kunci: Leea indica, antidislipidemia, LDL, HDL, flavonoid, tikus Wistar.

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211FF03020

Department of Pharmacy, Faculty of Pharmacy
Bhakti Kencana University

ABSTRACT

Dyslipidemia is a lipid metabolism disorder characterized by increased levels of LDL (Low-Density Lipoprotein) and decreased levels of HDL (High-Density Lipoprotein), which are major risk factors for cardiovascular diseases. Although lipid-lowering drugs such as statins are effective, they may cause side effects. Therefore, safer alternative therapies are needed, including those derived from natural sources. Leea indica (known as daun girang) contains active compounds such as flavonoids, saponins, tannins, and alkaloids that potentially improve lipid profiles. This study aimed to determine the antidyslipidemic activity and effective dose of Leea indica leaf extract on LDL and HDL levels in male Wistar rats. The in vivo study involved 30 rats divided into six groups, including a normal control, induced control, a simvastatin comparison group, and three treatment groups receiving Leea indica extract at doses of 50, 100, and 200 mg/kg body weight. Dyslipidemia was induced using a high-fat, high-carbohydrate diet and fructose for 28 days. LDL and HDL levels were measured using the Microlab 300 analyzer. The results showed that the extract significantly decreased LDL levels and increased HDL levels ($p<0.05$) compared to the induced control group. The 100 mg/kg dose was the most effective, showing similar effects to simvastatin. This effect is thought to be due to the flavonoid content, which inhibits the HMG-CoA reductase enzyme and enhances the expression of proteins involved in HDL formation. In conclusion, Leea indica leaf extract has potential as a natural antidyslipidemic agent, with 100 mg/kg being the most effective dose comparable to simvastatin.

***Keywords**: Leea indica, antidyslipidemic, LDL, HDL, flavonoid, Wistar rats.*