

ABSTRAK

Latar Belakang: Hiperkolesterolemia merupakan salah satu faktor risiko utama hipertensi dan penyakit kardiovaskular. Pemanfaatan terapi komplementer berbasis tanaman herbal mulai digalakkan sebagai alternatif pengobatan dengan efek samping minimal. Polihebal yang terdiri dari ekstrak bawang putih (*Allium sativum Bulbus*), buah kapulaga (*Amomum compactum*), dan rimpang temu ireng (*Curcuma aeruginosa*) diyakini memiliki potensi sinergis dalam menurunkan kadar kolesterol total.

Tujuan: Mengetahui pengaruh pemberian kapsul polihebal terhadap kadar kolesterol total pada tikus wistar model hipertensi.

Metode: Penelitian eksperimental dengan desain *post-test only control group*. Subjek berupa 36 ekor tikus wistar, terdiri dari kelompok normal, kontrol negatif, kontrol positif (Captopril), serta tiga kelompok perlakuan polihebal dengan dosis 63 mg/kgBB, 126 mg/kgBB, dan 252 mg/kgBB. Model hipertensi diinduksi melalui *unilateral nephrectomy* dan injeksi DOCA-salt. Pengukuran kolesterol dilakukan menggunakan metode *electrode-based biosensor*. Data dianalisis menggunakan uji normalitas (Shapiro-Wilk), homogenitas (Levene), ANOVA satu arah, dan uji lanjut LSD.

Hasil: Terdapat perbedaan bermakna antar kelompok ($p < 0.05$). Kelompok perlakuan dosis tinggi (252 mg/kgBB) menunjukkan penurunan kadar kolesterol total paling signifikan dibandingkan kelompok kontrol negatif dan positif. Dosis sedang (126 mg/kgBB) menunjukkan efektivitas setara dengan Captopril, sedangkan dosis rendah (63 mg/kgBB) kurang efektif.

Kata Kunci: Polihebal, *Allium sativum*, *Amomum compactum*, *Curcuma aeruginosa*, kolesterol total, tikus hipertensi, DOCA-salt

ABSTRACT

Background: Hypercholesterolemia is a major risk factor for hypertension and cardiovascular diseases. The use of herbal-based complementary therapy has gained popularity as an alternative treatment with minimal side effects. A polyherbal formulation consisting of garlic extract (*Allium sativum* Bulbus), cardamom fruit (*Amomum compactum*), and black turmeric rhizome (*Curcuma aeruginosa*) is believed to have synergistic potential in reducing total cholesterol levels.

Objective: To determine the effect of polyherbal capsule administration on total cholesterol levels in hypertensive Wistar rats.

Methods: This was an experimental study using a post-test only control group design. The subjects were 36 Wistar rats divided into six groups: normal, negative control, positive control (Captopril), and three polyherbal treatment groups with doses of 63 mg/kgBW, 126 mg/kgBW, and 252 mg/kgBW. Hypertension was induced via unilateral nephrectomy and DOCA-salt injection. Cholesterol levels were measured using an electrode-based biosensor method. Data were analyzed using the Shapiro-Wilk normality test, Levene's test for homogeneity, one-way ANOVA, and LSD post hoc test.

Results: There was a significant difference between groups ($p < 0.05$). The high-dose polyherbal group (252 mg/kgBW) showed the most significant reduction in total cholesterol levels compared to the negative and positive control groups. The medium dose (126 mg/kgBW) was equally effective as Captopril, while the low dose (63 mg/kgBW) was less effective.

Keywords: Polyherbal, *Allium sativum*, *Amomum compactum*, *Curcuma aeruginosa*, total cholesterol, hypertensive rats, DOCA-salt