

ABSTRAK

KAJIAN PERANAN KURKUMINOID EKSTRAK TEMULAWAK DALAM MENGHAMBAT LAJU TOTAL KOLESTEROL PLASMA PADA TIKUS PUTIH YANG DIINDUKSI PAKAN ATEROGENIK

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Aterosklerosis dapat disebabkan hiperkolesterolemia yang dicirikan dengan tingginya kadar total kolesterol dari batas normal. Temulawak (*Curcuma xanthorrhiza*) adalah tanaman herbal yang memiliki kemampuan untuk menurunkan kadar total kolesterol serta menghambat peroksidasi lipid yang menjadi awal mula terjadinya aterosklerosis. Penelitian ini bertujuan untuk mengetahui efek hambatan kurkuminoid ekstrak temulawak 5 µg/ekor pada tikus putih (*Rattus norvegicus*) terhadap kadar total kolesterol plasma yang diinduksi pakan atherogenik.

Sebanyak 10 ekor tikus putih berumur dua bulan dibagi menjadi dua kelompok, yaitu kelompok A sebagai kontrol pakan yang diberi pakan pellet normal, kelompok B sebagai kelompok kontrol atherogenik yang diberi pakan atherogenik 10%, kemudian dilanjutkan dengan perlakuan yang diberi pakan atherogenik 10% serta ekstrak kurkuminoid temulawak dengan dosis 5 µg/ekor. Semua kelompok diadaptasi selama dua minggu, dilanjut perlakuan selama dua bulan. Pengambilan darah dilakukan di hari ke-0, bulan kesatu, dan bulan kedua melalui vena optikus. Kadar total kolesterol diukur menggunakan kit kolesterol metode *Enzymatic Endpoint* (CHOD-PAP). Analisis data menggunakan One Way ANOVA dan uji Post Hoc.

Hasil penelitian menunjukkan tidak adanya penurunan kadar total kolesterol setelah diberi hambatan kurkuminoid. Hasil ini menunjukkan kurkuminoid ekstrak temulawak dengan dosis 5 µg/ekor selama 1 hingga 2 bulan belum mampu menghambat reaksi pembentukan kadar total kolesterol plasma pada tikus yang diberi pakan atherogenik.

Kata kunci: Kadar total kolesterol, Temulawak, Aterosklerosis.

ABSTRACT

ASSESSING THE ROLE OF TEMULAWAK EXTRACT CURCUMINOID IN INHIBITING TOTAL PLASMA CHOLESTEROL RATE IN WHITE RATS INDUCED BY ATEROGENIC FEED

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Atherosclerosis can be caused by hypercholesterolemia, which is characterized by high levels of total cholesterol from normal limits. Temulawak (*Curcuma xanthorrhiza*) is a herbal plant that has the ability to reduce total cholesterol levels and inhibit lipid peroxidation which can cause atherosclerosis. The purpose of this study was to determine the inhibition effect of 5 µg/rat curcuminoid temulawak extract in white rats (*Rattus norvegicus*) induced with an atherogenic feed on plasma total cholesterol levels.

A total of 10 white rats aged two months were divided into two groups, namely group A as a feed control fed normal pellet, group B as a atherogenic control group fed 10% atherogenic feed, then continued by a treatment group fed atherogenic 10% and curcuminoid temulawak extract at a dose of 5 µg/rat. All groups were adapted for two weeks, followed by treatment for two months. Blood drawn on the day 0, first month, and second month through the optic vein. Total cholesterol levels were measured using the cholesterol kit Enzymatic Endpoint (CHOD-PAP) method. The analysis used One Way ANOVA test and Post Hoc test.

Research results showed no decrease in total cholesterol levels after curcuminoid inhibition. The result showed that curcuminoid temulawak extract at a dose of 5 µg/rat for 1 up to 2 months has not been able to inhibit the increase in total blood plasma cholesterol levels of induced atherogenic feed rats.

Keywords: Total cholesterol level, Temulawak, Atherosclerosis.