

ABSTRAK

Latar Belakang : Aterosklerosis merupakan proses patologis kompleks yang diawali dengan adanya disfungsi endotel, salah satunya dipicu oleh proses inflamasi akibat peningkatan kadar kolesterol LDL dan paparan asap rokok. Daun teh putih (*Camellia sinensis*) menunjukkan efek antiinflamasi yang belum diketahui efeknya pada proses aterosklerosis

Tujuan : Membuktikan pengaruh pemberian ekstrak teh putih terhadap kadar IL-6, jumlah sel busa, dan rasio ketebalan tunika intima/media tikus wistar yang diinduksi aterosklerosis

Metode : 30 tikus wistar jantan dibagi dalam 5 kelompok secara acak yaitu K (kontrol sehat), K- (tidak diberi terapi), P1, P2, dan P3 (Ekstrak teh putih 100, 200, 400 mg/kgBB/hari). Kadar IL-6 diukur dengan metode ELISA. Jumlah sel busa dan rasio ketebalan tunika intima/media diamati dari jaringan yang tercat dengan pengecatan Haematoxylin Eosin pada perbesaran mikroskop 400x

Hasil : Pemberian ekstrak teh putih dosis bertingkat pada kelompok P1, P2, dan P3 dapat menurunkan kadar IL-6, jumlah sel busa, dan rasio ketebalan tunika intima/media aorta abdominalis secara signifikan (secara berurutan $p < 0,001$; $p = 0,001$; $p = 0,001$) dibandingkan kelompok K(-)

Kesimpulan : Pemberian ekstrak teh putih terutama pada dosis 400 mg/kgBB/hari berpengaruh terhadap penurunan kadar IL-6, jumlah sel busa, dan rasio ketebalan tunika intima/media aorta abdominalis pada tikus wistar jantan yang diinduksi aterosklerosis

Kata Kunci : aterosklerosis, IL-6, sel busa, *Camellia sinensis*

ABSTRACT

Background : Atherosclerosis is a complex pathological process begins with endothelial dysfunction, one of which is triggered by an inflammatory process due to increased levels of LDL cholesterol and exposure to cigarette smoke. White tea leaves (*Camellia sinensis*) show an anti-inflammatory effect which has not been known for its effect on the atherosclerotic process

Objective : to determine the effect of *Camellia sinensis* leaf extract on IL-6 levels, foam cell count, and the ratio of intimal/media thickness of Wistar rats induced atherosclerosis

Methods : 30 male wistar rats were randomly divided into 5 groups namely K (healthy control), K- (no therapy), P1, P2, and P3 (white extract 100, 200, 400 mg/kgBW/day). IL-6 levels were measured by ELISA method. The number of foam cells and the ratio of intimal/media thickness were observed from tissue stained with *Haematoxylin Eosin* staining at 400x microscope magnification

Results : Administration of graded doses of white tea extract in groups P1, P2, and P3 can significantly reduce IL-6 levels, the number of foam cells, and the ratio of the thickness of the tunica intima/media of the abdominal aorta significantly compared to the K(-) group (respectively $p < 0,001$; $p = 0,001$; $p = 0,001$)

Conclusion : Dose-dependent white tea leaf extraction especially in 400 mg/kgBW/day affects the decrease in IL-6 levels, the number of foam cells, and the ratio of intimal/media thickness in male Wistar rats induced atherosclerosis

Keywords : atherosclerosis, IL-6, foam cell, intima-media thickness ratio, *Camellia sinensis*