

ABSTRACT

Background: Hypercholesterolemia can cause liver damage, indicated by increased ALT and AST enzyme levels. Karamunting leaves (*Rhodomyrtus tomentosa*) contain flavonoids with potential cholesterol-lowering and hepatoprotective effects. This study aimed to evaluate the effect of karamunting leaf extract on total cholesterol, ALT, and AST levels in hypercholesterolemic Wistar rats.

Methods: This experimental study involved 25 Wistar rats divided into five groups: negative control, positive control, and three treatment groups receiving karamunting leaf extract at doses of 200, 400, and 800 mg/kg BW. All rats were fed a high-fat diet, and total cholesterol, ALT, and AST levels were measured before and after two weeks of treatment.

Results: Karamunting leaf extract significantly reduced total cholesterol levels at doses of 200 and 800 mg/kg BW ($p < 0.05$). However, no significant changes were observed in ALT and AST levels across all groups.

Conclusion: Karamunting leaf extract effectively reduces total cholesterol levels in hypercholesterolemic rats, particularly at doses of 200 and 800 mg/kg BW, without affecting ALT and AST levels. Further research is needed to confirm its safety for liver function.

Keywords: hypercholesterolemia, karamunting_leaves, cholesterol, ALT, AST, Wistar rats

ABSTRAK

Latar Belakang: Hiperkolesterolemia dapat memicu kerusakan hati yang ditandai dengan peningkatan enzim ALT dan AST. Daun karamunting (*Rhodymyrtus tomentosa*) mengandung flavonoid yang berpotensi menurunkan kolesterol dan melindungi hati. Penelitian ini mengevaluasi pengaruh ekstrak daun karamunting terhadap kadar kolesterol total, ALT, dan AST pada tikus Wistar yang diinduksi hiperkolesterolemia.

Metode: Penelitian ini menggunakan 25 tikus Wistar yang dibagi menjadi lima kelompok: kontrol negatif, kontrol positif, dan tiga kelompok perlakuan dengan ekstrak daun karamunting dosis 200, 400, dan 800 mg/kg BB. Semua tikus diberi pakan tinggi lemak, dan kadar kolesterol total, ALT, serta AST diukur sebelum dan sesudah perlakuan selama dua minggu.

Hasil: Ekstrak daun karamunting secara signifikan menurunkan kadar kolesterol total pada dosis 200 dan 800 mg/kg BB ($p < 0,05$). Namun, tidak ditemukan perubahan signifikan pada kadar ALT dan AST di semua kelompok.

Kesimpulan: Ekstrak daun karamunting efektif menurunkan kadar kolesterol total pada tikus hiperkolesterolemia, terutama pada dosis 200 dan 800 mg/kg BB, tanpa memengaruhi kadar ALT dan AST. Penelitian lebih lanjut diperlukan untuk memastikan keamanannya terhadap fungsi hati.

Kata Kunci: hiperkolesterolemia, daun_karamunting, kolesterol, ALT, AST, tikus Wistar