

ABSTRAK

UJI EFEKTIVITAS EKSTRAK BUAH PARIJOTO (*Medinilla speciosa* Blume) TERHADAP GAMBARAN HISTOPATOLOGI GINJAL MENCIT JANTAN (*Mus musculus L*) GALUR BALB/C DIET TINGGI LEMAK

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Abstrak

Latar Belakang: Hiperlipidemia menjadi faktor risiko penting pada gangguan ginjal kronis (CKD) yang dapat memicu inflamasi, stres oksidatif, dan kerusakan jaringan ginjal. Penggunaan bahan alami seperti ekstrak buah parijoto (*Medinilla speciosa* Blume), yang mengandung flavonoid serta antioksidan tinggi, dipertimbangkan sebagai alternatif terapi. Studi ini bertujuan mengetahui pengaruh pemberian ekstrak buah parijoto terhadap gambaran histopatologi ginjal mencit jantan galur BALB/c yang diinduksi diet tinggi lemak. **Metode:** Studi ini memanfaatkan metode eksperimental rancangan *post-test only control group*. Tiga puluh ekor mencit jantan galur BALB/c dipisah jadi enam kelompok: K0 (kontrol normal), K- (pemberian diet tinggi lemak tanpa terapi), K+ (pemberian diet tinggi lemak dengan simvastatin), dan tiga kelompok perlakuan (P1, P2, P3) ekstrak parijoto dosis bertingkat. Parameter yang diteliti meliputi infiltrasi sel radang, degenerasi melemak, nekrosis tubulus ginjal. Data dianalisis dengan memanfaatkan uji *Kruskal-Wallis* serta *Mann-Whitney*. **Hasil:** Kelompok K- melihat kerusakan jaringan ginjal paling tinggi. Pemberian simvastatin (K+) menurunkan tingkat kerusakan, sedangkan kelompok P2 (dosis sedang ekstrak parijoto) menunjukkan hasil paling mendekati kondisi normal, dengan skor histopatologi terendah setelah K0. Sebaliknya, pemberian dosis tinggi (P3) justru meningkatkan kerusakan jaringan. **Kesimpulan:** Ekstrak buah parijoto pada dosis sedang (P2) lebih efektif dibandingkan simvastatin dalam memperbaiki gambaran histopatologi ginjal mencit dengan diet tinggi lemak. Dosis tinggi tidak disarankan karena dapat memperberat kerusakan jaringan.

Kata kunci: Ekstrak buah parijoto, ginjal, hiperlipidemia, histopatologi, diet tinggi lemak

ABSTRACT

THE EFFECTIVENESS TEST OF PARIJOTO FRUIT EXTRACT (*Medinilla speciosa* Blume) ON KIDNEY HISTOPATHOLOGY IN BALB/c MALE MICE (*Mus musculus L*) FED A HIGH FAT DIET

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Abstract

Background: Hyperlipidemia is a major risk factor for chronic kidney disease (CKD), as it can trigger inflammation, oxidative stress, and tissue damage in the kidneys. The use of natural substances such as parijoto fruit extract (*Medinilla speciosa* Blume), which contains high levels of flavonoids and antioxidants, is considered a potential alternative therapy. This study aimed to determine the effect of parijoto fruit extract on kidney histopathology in BALB/c male mice induced with a high-fat diet. **Methods:** This was an experimental study using a post-test only control group design. Thirty male BALB/c mice were divided into six groups: K0 (normal control), K- (high-fat diet without treatment), K+ (high-fat diet with simvastatin), and three treatment groups (P1, P2, P3) that received graded doses of parijoto extract. The observed parameters included inflammatory cell infiltration, fatty degeneration, and tubular necrosis. Data were analyzed using Kruskal-Wallis and Mann-Whitney tests. **Results:** The K- group led most severe kidney tissue damage. Simvastatin (K+) reduced the severity of tissue damage, while the P2 group (moderate dose of parijoto extract) showed the best improvement, with histopathology scores closest to the normal control. In contrast, the P3 group (high dose) exhibited increased tissue damage. **Conclusion:** Parijoto fruit extract at a moderate dose (P2) was better at achieving simvastatin in improving the kidney histopathology of mice receiving a high-carb diet. High doses are not recommended due to their potential to worsen tissue damage.

Keywords: Parijoto extract, kidney, hyperlipidemia, histopathology, high-fat diet