EFEK PEMBERIAN BAWANG HITAM TERHADAP GAMBARAN FIBROSIS GINJAL TIKUS PUTIH (*Rattus norvegicus*) MODEL HIPERURISEMIA

ABSTRAK

Latar Belakang: Kondisi hiperurisemia dapat menyebabkan fibrosis ginjal. Kondisi ini menurunkan fungsi ginjal dan merupakan penyebab penyakit ginjal kronik. Bawang hitam berpotensi sebagai antioksidan dan antiinflamasi karena mengandung senyawa flavonoid, polifenol, SAC, dan 5-HMF, sehingga berpotensi mengurangi fibrosis ginjal. **Tujuan:** Penelitian ini bertujuan mengetahui efek pemberian bawang hitam terhadap gambaran fibrosis ginjal tikus putih model hiperurisemia. **Metode:** Penelitian ini merupakan penelitian eksperimental terhadap BBT dengan *posttest only with control group design.* Terdapat tiga puluh hewan coba dibagi menjadi lima kelompok perlakuan. Kelompok A sebagai kontrol hiperurisemia, kelompok B dengan obat standar, kelompok C, D, E kelompok perlakuan larutan bawang hitam dengan dosis berturut-turut 240, 480, 960 mg/hari selama 14 hari. BBT disimpan dalam larutan NBF 10% selama satu tahun, dibuat preparat HE, dan diamati. **Hasil:** Rerata skor area fibrosis tubulointerstisial kelompok A, B, C, D, E berturut-turut 2,7±0,2757; 1,6±0,3347; 1,3±0,2098; 2,2±0,2828; 2,9±0,2757. Hasil uji hipotesis *One-Way* ANOVA terdapat perbedaan signifikan ($p<0,05$). Hasil uji *post-hoc Tukey* HSD menunjukkan perbedaan paling signifikan ($p<0,05$) adalah antara kelompok A dengan kelompok B dan C. **Kesimpulan:** Pemberian larutan bawang hitam dapat mengurangi fibrosis ginjal tikus putih model hiperurisemia dengan dosis terbaik 240 mg/hari selama 14 hari.

Kata Kunci: Bawang Hitam, Fibrosis Ginjal, Hiperurisemia, Tikus Putih.

THE EFFECT OF BLACK GARLIC ON THE KIDNEY FIBROSIS PROFILE IN WHITE RATS (Rattus norvegicus) WITH A HYPERURICEMIA MODEL

ABSTRACT

Background: *The condition of hyperuricemia can lead to kidney fibrosis. This condition reduces kidney function and is a cause of chronic kidney disease. Black garlic has the potential as an antioxidant and anti-inflammatory agent due to its content of flavonoids, polyphenols, SAC, and 5-HMF compounds, thus potentially reducing kidney fibrosis.* ***Objective:*** *This study aims to investigate the effects of administering black garlic on the kidney fibrosis profile in a hyperuricemia model of white rats.* ***Method:*** *This study used experimental research on Biological Material Preserved (BMP) using posttest only with control group design. Thirty experimental animals were divided into five treatment groups. Group A served as the hyperuricemia control, Group B received the standard drug, while Groups C, D, and E were treated with black garlic solution at doses of 240, 480, and 960 mg/day, respectively, for 14 days. The BMP was stored in a 10% NBF solution for one year, then prepared as HE slides, and observed.* ***Results:*** *The mean scores of tubulointerstitial fibrosis area in groups A, B, C, D, E were 2.7±0.2757, 1.6±0.3347, 1.3±0.2098, 2.2±0.2828, and 2.9±0.2757, respectively. The One-Way ANOVA test revealed a significant difference ($p<0.05$). Post-hoc Tukey HSD analysis indicated that the most significant difference ($p<0,05$) was between group A with group B and C.* ***Conclusion:*** *The administration of black garlic solution reduces kidney fibrosis in white rat models with hyperuricemia, with the most effective dose being 240 mg/day for 14 days.*

Keywords: *Black Garlic, Hyperuricemia, Kidney Fibrosis, White Rat.*