Efek Pemberian Ekstrak Etanol Daun Binahong pada Tikus Model Gagal Ginjal Kronik Unilateral Ureteral Obstruction terhadap Aktivitas Katalase, Superoksida Dismuthase, dan Kadar Malondialdehid = The Effects of the Ethanol Extract of Binahong Leaves Administration in Chronic Kidney Failure Unilateral Ureteral Obstruction Rat Model against Catalase, Superoxide Dismuthase, and Malondialdehyde Levels.

Putri Sagita Utami, author

Abstrak

Radikal bebas dapat dihasilkan dari proses inflamasi pada kasus penyakit gagal ginjal kronis. Ekstrak etanol daun binahong (Anredera cordifolia (Ten.) Steenis) diketahui memiliki kandungan flavonoid yakni kuersetin yang memiliki efek protektif dari pembentukan radikal bebas. Penelitian ini bertujuan untuk mengetahui dosis optimum ekstrak etanol daun binahong terhadap kerusakan ginjal kronik pada tikus galur Sparague Dawley. Penetapan hewan model menggunakan metode Unilateral Ureteral Obstruction (UUO) kecuali pada kelompok kontrol normal yang diberi perlakuan operasi sham. Tikus dibagi menjadi 7 kelompok yakni K1 (kontrol normal = sham + cairan pembawa), K2 (kontrol negatif = UUO + cairan pembawa), K3 (kontrol positif = UUO + losartan 1,18 mg/200 grBB), K4 (kontrol pembanding = UUO + kuersetin 9,9 mg/200grBB), D1 (dosis uji 1 = UUO + ekstrak etanol daun binahong 75 mg/kgBB), D2 (dosis uji 2 = UUO + ekstrak etanol daun binahong 150mg/kgBB), dan D3 (dosis uji 3 = UUO + ekstrak etanol daun binahong 300mg/kgBB). Masing-masing zat uji diberikan setelah satu hari perlakuan UUO selama 14 hari. Parameter yang akan diperiksa pada masing-masing kelompok yakni aktivitas enzim superoksida dismuthase (SOD), aktivitas enzim katalase, dan kadar malondialdehid (MDA). Hasilnya tidak terdapat perbedaan yang bermakna pada nilai kadar MDA dan aktivitas SOD antar kelompok perlakuan. Namun terdapat perbedaan yang bermakna pada nilai aktivitas katalase antar kelompok perlakuan. Dosis optimum belum dapat ditentukan karena nilai RSD pada hasil masing-masing kelompok lebih dari 15%.

.....Free radicals can be produced from the inflammatory process in cases of chronic kidney failure. The ethanol extract of binahong leaves (Anredera cordifolia (Ten.) Steenis) is known to have a flavonoid content, quercetin which has a protective effect from the formation of free radicals. This study aims to determine the optimum dose of binahong leaf ethanol extract against chronic kidney damage in Sparague Dawley rats. Determination of animal models using the Unilateral Ureteral Obstruction (UUO) method except in the normal control group treated with sham operations. Rats were divided into 7 groups namely K1 (normal control = sham + carrier fluid), K2 (negative control = UUO + carrier fluid) K3 (positive control = UUO + losartan 1.18 mg / 200 grBW), K4 (comparative control = UUO + quercetin 9.9 mg / 200grBW), D1 (test dose 1 = UUO + ethanol extract binahong leaves 75 mg / kgBB), D2 (test dose 2 = UUO + extract Binahong ethanol leaves 150mg / kgBW), and D3 (test dose 3 = UUO + 300mg / kgBW leaves ethanol extract). Each test substance was given after one day of UUO treatment for 14 days. The parameters was examined in each group are the activity of the superoxide dismuthase (SOD) enzyme, catalase enzyme activity, and the level of malondialdehyde (MDA). The results showed there were no significant differences in the value of MDA levels and SOD activity between

treatment groups. However, there were significant differences in the value of catalase activity between treatment groups. The optimum dose cannot be determined because the RSD value in this results of each group is more than > 15%.