Efek hibiscus sabdariffa linn dalam mencegah stres oksidatif pada tikus yang diberi latihan fisik aerobik overtraining pengamatan terhadap kadar mda dan aktivitas glutation peroksidase = Effect of hibiscus sabdariffa linn in preventing oxidative stress administration in rats fed aerobic exercise overtraining observation on mda and the activity of glutathione peroxidase

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Abstrak

Sindroma overtraining dapat disebabkan oleh stres oksidatif akibat peningkatan produksi ROS. Penelitian ini bertujuan mengetahui pemberian H. sabdariffa L. dapat mencegah sindroma overtraining berdasarkan penurunan kadar MDA dan peningkatan aktivitas GPx plasma. Penanda sindroma overtraining adalah parameter fisiologis berat badan dan penanda biologis kadar IL-6 plasma. Metode penelitian eksperimental pada 20 ekor tikus jantan galur Wistar usia 8-10 minggu, berat badan 200-250 gram. Hewan coba secara acak terbagi atas kelompok kontrol (K), ekstrak air H. sabdariffa L. 400 mg/kgBB/hari (KH), overtraining (O), dan overtraining diberi ekstrak air H. sabdariffa L. 400 mg/kgBB/hari (OH). Hasil penelitian ditemukan berat badan pada kelompok O menurun dibanding K, namun tidak signifikan secara statistik. Kadar IL-6 pada kelompok O meningkat secara signifikan dibanding K. Kadar MDA pada kelompok OH menurun secara signifikan dibanding O. Aktivitas GPx pada kelompok OH meningkat dibanding O, namun tidak signifikan secara statistik. Hasil mengindikasikan bahwa ekstrak air H. sabdariffa L. dapat mencegah sindroma overtraining berdasarkan penurunan kadar MDA dan peningkatan aktivitas GPx.

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Overtraining syndrome can be caused by oxidative stress due to increased production of ROS. The aim of the study was to determine the administration of H. sabdariffa L. can prevent overtraining syndrome by decreased levels of MDA and increase in GPx activity of plasma. The marker of overtraining syndrome are physiological parameters weight and biological marker levels of IL-6 plasma. Experimental research methods in 20 of male Wistar strain rat aged 8-10 weeks, weight 200-250 g. Experimental animals were radomly divided into groups of a control (K), aqueous extract of H. sabdariffa L. (KH), overtraining (O), and overtraining with aqueous extract of H. sabdariffa L. (OH). Research found weight decreased in group O than K, but not statistically significant. Levels of IL-6 increased significantly compared to the group O than K. MDA levels in the OH group decreased significantly compared to O. Activity of GPx increased compared to the OH group than O, but not statistically significant. Results indicates that aqueous extract of H. sabdariffa L. can prevent overtraining syndrome by decreasing levels of MDA and increasing in GPx activity.