

INTISARI

Telah dilakukan penelitian efek hepatoprotektif air perasan umbi wortel (*Daucus carota*. L) pada mencit jantan terinduksi CCl_4 yang bertujuan untuk mendapatkan data dan bukti adanya efek hepatoprotektif serta dosis efektif air perasan umbi wortel akibat perlakuan hepatotoksin CCl_4 .

Penelitian ini mengikuti jenis penelitian rancangan acak lengkap pola searah. Lima puluh empat mencit jantan galur Swiss, umur 2 sampai 3 bulan, berat badan 20 sampai 30 gram, dibagi menjadi 9 kelompok sama banyak. Kelompok I diberi CCl_4 dosis 3,92 ml/kgBB, kelompok II dan III masing-masing diberi aquadest dosis 31,5 ml/kgBB dan air perasan umbi wortel dosis 31,5 ml/kgBB sekali sehari selama 6 hari. Kelompok IV sampai IX diberi air perasan umbi wortel dengan dosis berturut-turut 0,14; 0,392; 1,162; 3,5; 10,5; dan 31,5 ml/kgBB sekali sehari selama 6 hari, dan pada hari ke-7 diberi CCl_4 dosis 3,92 ml/kgBB. Setelah 48 jam mencit kelompok I sampai IX diambil darahnya pada bagian sinus orbitalis mata untuk ditetapkan aktivitas GPT-serumnya dengan metode kinetik ALAT (GPT) FS*. Mencit dikorbankan dan diambil hatinya untuk dibuat preparat histologi. Data skoring diamati berdasarkan tingkat kerusakannya, lalu dianalisis dengan uji statistik non parametrik Kruskal Wallis dan Mann Whitney. Data GPT-serum dan berat hati relatif diolah menggunakan uji Kolmogorov Smirnov, dilanjutkan analisis varian satu arah dan uji LSD dengan taraf kepercayaan 95%. Data berat badan diolah menggunakan analisis *Split-plot*. Dosis efektif tengah (ED_{50}) dihitung dengan menggunakan analisis probit.

Hasil penelitian menunjukkan bahwa air perasan umbi wortel kelompok IV sampai IX mampu menurunkan aktivitas GPT-serum dan menunjukkan perbedaan bermakna terhadap kelompok I. Hasil analisis skoring kelompok IV dan V secara histopatologi menunjukkan perbedaan tidak bermakna dan kelompok VI sampai IX menunjukkan perbedaan bermakna terhadap kelompok I. Hasil analisis berat badan mencit menunjukkan perbedaan tidak bermakna dan hasil analisis berat hati relatif menunjukkan perbedaan bermakna. Nilai ED_{50} hepatoprotektif air perasan umbi wortel adalah 12,189 ml/kgBB.

ABSTRACT

An experimental study on the hepatoprotective effect of squeezed juice of carrot (*Daucus carota* L.) has been conducted on male mice induced by CCl_4 that is aimed to get scientific data, evidence, and the estimated quantity of hepatoprotective effect of the squeezed juice of carrot as a result of hepatotoxine CCl_4 .

A pure experimental study was done following the direct sampling design and was analyzed by one-way variant. Fifty-four male Switzerland strain mice, two to three month age, and twenty to thirty weight, were divided into nine groups with the same equal number. The first group was given CCl_4 with the dose 3,92 ml/kgBW. The second and third groups were given each 31,5 ml/kgBW aquadest and given squeezed juice of carrot with the doses 31,50 ml/kgBW once a day for six days. The fourth to ninth groups which were given squeezed juice of carrot with the doses orally of 0,14 ml/kgBW; 0,392 ml/kgBW; 1,162 ml/kgBW; 3,50 ml/kgBW; 10,5 ml/kgBW; and 31,50 ml/kgBW once a day for six days and for the seventh day they were given orally CCl_4 with the dose 3,92 ml/kgBW. After 48 hours, the blood of the mice from the first to ninth groups were sampled at the cys sinus orbatialis to determine the activity level of their SGPT by a kinetic method of ALAT (GPT) FS*. The mice were sacrificed and their liver were taken to be made histological blood smear. Scoring data based on the stage of hepatic destruction, and were analyzed using Kruskal Wallis and Mann Whitney non-parametric statistical test. SGPT activity data and the relative liver weight data of mice were evaluated based on the statistical test of one-way variant analyzed and LSD test at 95% significant level. The body weight data was analyzed by using the statistic analysis *Split-plot*. The median effective doses (ED_{50}) were calculated by using probit analysis.

The result of the experimental study showed that the squeezed juice of carrot from fourth to ninth groups could decrease the SGTP activity and it was a significantly difference toward the first group. Scoring analysis result of fourth and fifth groups as histological showed the unsignificantly difference toward first group and the six to ninth groups showed the significantly difference toward the first group. The body weight result analysis of mice showed the unsignificantly difference and the relative liver weight of mice showed the significantly difference. The hepatoprotective median effective doses (ED_{50}) of squeezed juice of carrot was 12,189 ml/kgBW.