Efektivitas Antioksidan Ekstrak Air Syzygium aromaticum terhadap Kerusakan Hati Tikus Wistar Akibat CCl4 yang Dinilai Melalui Aktivitas Spesifik Glutatione Peroksidase = Efficacy of Syzgium aromaticum Extract on Water as An Antioxidant on CCl4-Induced Liver Damage in Wistar Rats Determined by the Specific Activity of Glutathione Peroxidase / Stephen Diah Iskandar

Stephen Diah Iskandar, author

Abstrak

ABSTRAK
Syzygium aromaticum (cengkih) mengandung banyak zat yang bersifat antioksidan. Tujuan penelitian untuk mengetahui efektivitas antioksidan ekstrak cengkih dan pengaruh lama pemberian ekstrak cengkih dalam mengobati kerusakan hati akibat CCl4 yang dinilai melalui aktivitas spesifik glutation peroksidase (GPx). Penelitian ini menggunakan desain eksperimental. Penelitian dilakukan di Laboratorium Biokimia dan Biologi Molekuler Fakultas Kedokteran Universitas Indonesia, bulan Juni hingga Agustus 2014. Sampel sebanyak 36 tikus dibagi dalam 6 kelompok, yaitu kontrol positif (mendapat α-tokoferol), kontrol negatif (hanya mendapat CCl4), cengkih 1 hari, 3 hari, 5 hari, dan 7 hari. Data diolah dengan SPSS versi 20. Hasilnya menunjukkan rerata aktivitas spesifik GPx (U/gr protein) kontrol positif (6,11), kontrol negatif (8,06), cengkih 1 hari (8,42), 3 hari (6,95), 5 hari (7,64), dan 7 hari (7,98). Hasil uji one-way Annova menunjukkan nilai p 0,769. Uji post hoc antara kontrol negatif dan perlakuan lainnya menunjukkan nilai p>0,05, dengan perbedaan rerata terbesar pada kontrol positif dan cengkih 3 hari. Disimpulkan, cengkih tidak mempunyai efek antioksidan yang bermakna untuk mengobati kerusakan hati dan lama pemberian cengkih tidak mempengaruhi efek antioksidannya secara bermakna.
<hr>
ABSTRACT
Syzygium aromaticum (clover) contains many antioxidant agents. This research was designed to determine the efficacy of clover extract as an antioxidant and the effect of duration of treatment to cure CCl4-induced liver damage that determined by the specific activity of glutathione peroxidase (GPx). This experiment was held in Biochemistry and Molecular Biology Laboratory Faculty of Medicine University of Indonesia, on 2014 June till August. Thirty six rats divided into 6 groups, that was positive control (received α-tocopherol), negative control (receieved CCl4), received clove for 1 day, 3 days, 5 days, and 7 days. The data was analyzed using SPSS 20. Result shows the specific activity of GPx (U/gr protein) in positive control (6,11), negative control (8,06), clove for 1 day (8,42), 3 days (6,95), 5 days (7,64), and 7 days (7,98). One-way Annova test shows p 0,769. Post hoc test between negative control and other groups shows p>0,05, with the highest mean difference is positive control and clove for 3 days. In conclusion, clove doesn’t have antioxidant effect to cure liver damaged and duration of treatment doesn’t influence the antioxidant effect significantly