ABSTRAK

Latar Belakang: Ginjal yang terpapar oleh bahan toksik akan menganggu sistem metabolisme. Salah satu zat yang menyebabkan penyakit ginjal karbon tetraklorida (CCL4). propolis memiliki kandungan senyawa *Caffeic acid pheneyhly ester* (CAPE) propolis menghambat reaksi oksidatif yang berlebihan akibat adanya proses inflamasi maupun metabolisme, mencegah kerusakan ginjal.
Tujuan: Membuktikan pengaruh ekstrak propolis terhadap kadar kreatinin dan histopatologi ginjal tikus yang di induksi karbon tetraklorida (CCL4).
Metode: Penelitian eksprimental dengan desain penelitian post test *only control group design.* Jumlah sampel 28 ekor tikus jantan wistar, dibagi menjadi empat kelompok. Kelompok K1 (diinjeksi CCL4) serta kelompok P1,P2 dan P3 (diinjeksi dosis 3,6 mg/200gr, 7,2 mg/200gr dan 14,4 mg/200gr). Pemberian ekstrak propolis diberikan selama 14 hari, dan pada hari ke-14 diberikan CCL4. Kadar kreatinin di uji menggunakan uji *One Way Anova* dilanjutkan dengan uji *Post Hoc* LSD. Histopatologi ginjal diuji menggunakan *Kruskal Wallis* dilanjutkan *Mann-Whitney U.*
Hasil: Hasil analisis uji *Post Hoc* LSD menunjukkan bahwa kadar kreatinin pada kelompok P1 (2,61±,083), P2 (1,75±1,75) P3 (1,13±,077) lebih kecil dari pada K1 (3,18±,065) P<0,05. Adapun uji statistik histopatologi ginjal menunjukkan bahwa (p<0,05) ada perbedaan K1,P1,P2, dan P3.
Kesimpulan: Pemberian Ekstrak CMCE propolis mampu menurunkan kadar kreatinin dan perbaikan histopatologi ginjal tikus jantan wistar yang di induksi karbon tetraklorida (CCL4).

Kata Kunci: Ekstrak CMCE propolis, kadar kreatinin Histopatologi Ginjal

ABSTRACT

Background: Kidneys exposed to toxic substances will disrupt the metabolic system. One of the substances that causes kidney disease is carbon tetrachloride (CCL4). propolis contains the compound Caffeic acid pheneyhly ester (CAPE) propolis inhibits excessive oxidative reactions due to inflammation and metabolic processes, preventing kidney damage.

Objective: To prove the effect of propolis extract on creatinine levels and renal histopathology of rats induced by carbon tetrachloride (CCL4).

Method: Experimental research with post test only control group design research design. The number of samples was 28 wistar male rats, divided into four groups. K1 group (injected with CCL4) and group P1, P2 and P3 (injected dose of 3.6 mg / 200gr, 7.2 mg / 200gr and 14.4 mg / 200gr). Provision of propolis extract is given for 14 days, and on day 14 is given CCL4. Creatinine levels were tested using the One Way Anova test followed by the LSD Post Hoc test. Renal histopathology was tested using the Kruskal Wallis followed by Mann-Whitney U.

Results: The results of the LSD Post Hoc test analysis showed that creatinine levels in group P1 (2.61 ±, 083), P2 (1.75 ± 1.75) P3 (1.13 ±, 077) were smaller than K1 (3 , 18 ± 065) P <0.05. The statistical test of renal histopathology shows that (p <0.05) there are differences in K1, P1, P2, and P3.

Conclusion: The administration of CMCE propolis extract was able to reduce creatinine levels and improve histopathology of renal wistar male rats induced by carbon tetrachloride (CCL4).

Keywords: CMCE propolis extract, creatinine level of kidney histopathology