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ELECTRONIC THESIS AND DISSERTATION UNSYIAH

TITLE

KADAR HEMOGLOBIN DAN JUMLAH ERITROSIT TIKUS PUTIH (*RATTUS NORVEGICUS*) STRAIN WISTAR SETELAH PEMBERIAN FORMALIN

ABSTRACT

KADAR HEMOGLOBIN DAN JUMLAH ERITROSIT TIKUS PUTIH (*Rattus norvegicus*) STRAIN WISTAR SETELAH PEMBERIAN FORMALIN

ABSTRAK

Penelitian ini bertujuan mengetahui pengaruh pemberian formalin melalui intraperitoneal terhadap kadar hemoglobin dan jumlah eritrosit pada tikus putih (*Rattus norvegicus*) strain Wistar. Hewan yang digunakan dalam penelitian ini adalah 24 ekor tikus putih jantan. Rancangan yang digunakan adalah rancangan acak lengkap (RAL) pola searah dengan 4 kelompok perlakuan. Masing-masing kelompok perlakuan terdiri atas enam ekor tikus. Kelompok kontrol tikus hanya diberi pakan dan air minum tanpa perlakuan apapun, kelompok 1 tikus diinjeksi formalin dengan dosis 1 mg/Kg bb, kelompok 2 diinjeksi formalin dengan dosis 2,5 mg/Kg bb, kelompok 3 diinjeksi formalin dengan dosis 5 mg/Kg bb. Masing-masing kelompok diberi perlakuan selama 14 hari berturut-turut secara intraperitoneal. Selama penelitian tikus diberi pakan dan air minum secara adlibitum. Pada hari ke 15, sampel darah diambil melalui sinus orbitalis menggunakan pipet kapiler. Hasil analisis statistik menunjukkan rata-rata ($\hat{\mu} \pm SD$) kadar hemoglobin (g/dl) K0 12,00 $\hat{\mu} \pm 0,72$, K1 9,63 $\hat{\mu} \pm 1,67$, K2 9,83 $\hat{\mu} \pm 1,30$, dan K3 9,76 $\hat{\mu} \pm 1,41$. Rata-rata ($\hat{\mu} \pm SD$) jumlah eritrosit (106/mm³) K0 7,06 $\hat{\mu} \pm 0,78$, K1 5,31 $\hat{\mu} \pm 1,46$, K2 5,35 $\hat{\mu} \pm 0,97$, dan K3 4,98 $\hat{\mu} \pm 0,59$. Hasil uji ANOVA menunjukkan kelompok K0 berpengaruh nyata (P0,05) antara kelompok perlakuan. Disimpulkan bahwa pemberian formalin secara intraperitoneal dapat menurunkan kadar hemoglobin dan jumlah eritrosit tikus putih strain Wistar.

Haemoglobin Levels and Number of Erythrocyte in Rats (*Rattus norvegicus*) Wistar strain after Formalin Administration

ABSTRACT

The aim of this study was to determine the effect of formalin administration via intraperitoneal to haemoglobin levels and to determine the number of erythrocyte in rats (*Rattus norvegicus*) Wistar strain. A number of 24 male rat used in this study. The research was design ed by uring completely randomized design (CRD) with 4 unidirectional treatment groups. Each group consisted of six rats. Group control rat was given no treatment in the control group. Formalin was administened by dosage of 1 mg/Kg of body weight in the first group, 2,5 mg/Kg of bw in second group, and 5 mg/Kg of bw in the third group. Each group was given the specific treatment for 14 days intraperitoneally. During the study, rat were fed as adlibitum. On day 15, blood was taken through orbital sinus by using a pipette capillary. The statistical analysis showed that mean ($\hat{\mu} \pm SD$) levels of haemoglobin (g/dl) were K0 12,00 $\hat{\mu} \pm 0,72$, K1 9,63 $\hat{\mu} \pm 1,67$, K2 9,83 $\hat{\mu} \pm 1,30$, and K3 9,76 $\hat{\mu} \pm 1,4$. Mean ($\hat{\mu} \pm SD$) number of erythrocyte (106/mm³) were K0 7,06 $\hat{\mu} \pm 0,78$, K1 5,31 $\hat{\mu} \pm 1,46$, K2 5,35 $\hat{\mu} \pm 0,97$, and K3 4,98 $\hat{\mu} \pm 0,59$. The results of ANOVA showed highly significant K0 (P0,05). It was concluded that the administration of formalin intraperitoneal can decrease haemoglobin levels erythrocyte in Wistar strain rat.