

ABSTRAK

EFEKTIVITAS PEMBUATAN HEWAN MODEL HIPERTENSI TIKUS PUTIH (*Rattus norvegicus*) INDUKSI KOLESTEROL DAN NaCl 8%

Susi Wulandari
14/364584/KH/8077

Penelitian ini bertujuan untuk membuat hewan model hipertensi dengan beberapa tahapan yaitu menginduksi 2,5 ml/kg suspensi 2% kolesterol dalam minyak jagung dan 3 ml NaCl 8% pada tikus putih (*Rattus norvegicus*) selama 28 hari.

Enam ekor tikus putih jantan (*Rattus norvegicus*) berumur 3 bulan digunakan dalam penelitian ini. Sebelum pemberian perlakuan tikus diadaptasikan terlebih dahulu selama 1 minggu, dengan diberi pakan diet normal. Tikus dibagi menjadi 2 kelompok. Masing-masing kelompok terdiri atas 3 ekor. Penelitian dilakukan selama 28 hari. Kelompok perlakuan pertama diberi pakan diet normal dan diberi 2,5 ml/kg suspensi 2% kolesterol dalam minyak jagung secara per oral. Dan kelompok perlakuan kedua diberi pakan diet normal dan diberi NaCl 8% secara per oral. Kedua kelompok dilakukan pengukuran tekanan darah menggunakan *Non Invasive Blood Pressure Tail Cuff Method* pada hari ke-0, 7, 14, 21, dan 28.

Hasil pengukuran tekanan darah menunjukkan bahwa kelompok induksi kolesterol dapat meningkatkan tekanan sistole dan diastole secara signifikan ($p < 0,05$). Sedangkan kelompok induksi NaCl 8% dapat meningkatkan tekanan sistole secara signifikan ($p < 0,05$) dan terdapat kenaikan tekanan diastole namun tidak signifikan ($p \geq 0,05$). Kedua kelompok memiliki perbedaan tekanan sistole dan diastole secara nyata ($p < 0,05$). Peningkatan tekanan darah paling signifikan pada induksi kolesterol dicapai hari ke-7 sebesar 136/97 mmHg, sedangkan kelompok induksi NaCl 8% pada hari ke-14 sebesar 128/92 mmHg. Dapat disimpulkan bahwa induksi 2,5 ml/kg suspensi 2% kolesterol dalam minyak jagung lebih efektif dalam pembuatan hewan model hipertensi dibandingkan dengan induksi NaCl 8%.

Kata kunci : Hipertensi, kolesterol, NaCl 8%, sistole, diastole

ABSTRACT

THE EFFECTIVENESS OF PROVIDING ANIMAL MODELS OF HYPERTENSION WHITE RAT (*Rattus norvegicus*) INDUCED BY CHOLESTEROL AND NaCl 8%

Susi Wulandari
14/364584/KH/8077

This study aims to providing animal models of hypertension induced by 2,5 ml/kg suspension of 2% cholesterol in corn oil and 3 ml NaCl 8% , all the doses were intragastrically administered to rats (*Rattus norvegicus*) for 28 days.

Six male rats (*Rattus norvegicus*) aged 3 months were used for this study. Before the induction all the rats were adapted for one week, and given normal diet. Rats were divided into 2 groups. Each groups consists of 3 rats. This study was conducted for 28 days. The first group was fed with normal diet and given 2,5 ml/kg of 2% cholesterol suspension in corn oil orally for 28 days. While the second group was fed a normal diet and given 3 ml NaCl 8% orally for 28 days. Both groups were performed blood pressure measurements using Non Invasive Blood Pressure Tail Cuff Method on day-0, 7, 14, 21, and 28.

The result of blood pressure measurement showed that cholesterol induction group could increase the systole and diastole pressure significantly ($p < 0,05$). While the NaCl 8% induction group could increase systolic pressure significantly ($p < 0,05$) and there was an increase in diastolic pressure but not significantly ($p \geq 0,05$). Both groups have significant differences in systolic and diastolic pressure ($p < 0,05$). The most significant increase in blood pressure on cholesterol induction was achieved at day 7 of 136/97 mmHg, whereas the 8% NaCl induction group on day 14 was 128/92 mmHg. It can be concluded that the induction of 2,5 ml/kg of 2% cholesterol suspension in corn oil is more effective on making animal models of hypertension compared with NaCl 8% induction.

Keywords : Hypertension, cholesterol, NaCl 8%, systolic, diastolic