UJI EFEKTIVITAS EKSTRAK DAUN UBI JALAR UNGU (*Ipomoea batatas L)* TERHADAP HISTOPATOLOGI ARTERI KORONER TIKUS GALUR WISTAR (*Rattus norvegicus*) DIABETES

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ABSTRAK

Diabetes Mellitus menginduksi dislipidemia yang menyebabkan aterosklerosis dan penyakit jantung coroner penyebab kematian tertinggi di dunia. Pemberian ektrak daun ubi jalar ungu (EDUJU) sebagai terapi suportif dapat menghambat aterosklerosis. Kandungan senyawa flavonoid, saponin, dan fenolik sebagai antioksidan, antiinflamasi, hipolipidemik, dan antihiperglikemik. Tujuan penelitian ini untuk mengetahui efektivitas pemberian EDUJU pada perbaikan histopatologi arteri coroner tikus diabetes. Penelitian eksperimen metode *postest only control group design* pada 24 ekor tikus wistar putih jantan, usia 2-3 bulan, dan berat badan 150-200 gram. Tikus dibagi menjadi 6 kelompok; kelompok kontrol normal (K1) diberikan pakan standar; kelompok kontrol negatif (K2); kontrol positif (K3); K4; K5; dan K6 diberikan pakan tinggi lemak selama 14 hari kemudian diinduksi aloksan 125 mg/kgBB, setelah 3 hari aloksan tikus diukur glukosa darah puasa dengan glucometer. Kelompok K3 diberikan simvastatin 0,9 mg/kgBB. Kelompok K4, K5, dan K6 diberikan EDUJU dosis masing-masing 150 mg/kgBB, 30 mg/kgBB, dan 600 mg/kgBB selama 18 hari. Hasil uji Kruskal Wallis menunjukkan pemberian EDUJU dosis 150 mg/kgBB, 300 mg/kgBB, dan 600 mg/kgBB berpengaruh signifikan (p<0.05) terhadap perbaikan histopatologi arteri coroner tikus galur wistar diabetes. Hasil uji Mann-Whitney menunjukkan pemberian ekstrak dosis 600 mg/kgBB hampir sama dengan kelompok kontrol normal dan simvastatin (p>0.05).

Kata kunci : Antioksidan, aterosklerosis, diabetes mellitus, esktrak daun ubi jalar ungu, histopatologi arteri coroner.

EFFECTIVENESS TEST OF PURPLE SWEET POTATO LEAF EXTRACT (*Ipomoea batatas L*) ON THE HISTOPATHOLOGY OF CORONARY ARTERIES IN DIABETIC WISTAR RATS (*Rattus norvegicus*)

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ABSTRACT

Diabetes mellitus induces dyslipidemia which causes atherosclerosis and coronary heart disease the highest cause of death in the world. The use of purple sweet potato leaf extract (PSPLE) as a supportive therapy can inhibit atherosclerosis. The presence of flavonoids, saponins, and phenolic compounds as antioxidants, anti-inflammatory, hypolipidemic, and antihyperglycemic. This study aims to determine the effectiveness of PSPLE administration on the improvement of coronary artery histopathology in diabetic rats. Experimental research using postest only control group design method with a sample of 24 male white wistar strain rats, 2-3 months old, and body weight 150-200 grams. Rats were divided into 6 groups; normal control group (K1) given standard feed; negative control group (K2); positive control (K3); K4; K5; and K6 given high-fat feed for 14 days then induced alloxan 125 mg/kg, after 3 days of alloxan rats measured fasting blood glucose with a glucometer. Group K3 was given simvastatin 0.9 mg/kg. Group K4, K5, and K6 were given PSPLE doses of 150 mg/kg, 30 mg/kg, and 600 mg/kg for 18 days. The Kruskal Wallis test showed that the administration of PSPLE doses of 150 mg/kg, 300 mg/kg, and 600 mg/kg had a significant effect ($p<0.05$) on the improvement of coronary artery histopathology in diabetic Wistar rats. The Mann-Whitney test showed that the administration of 600 mg/kgBB dose of extract was similar to the normal control group and simvastatin ($p>0.05$).

Keywords: *Antioxidant, atherosclerosis, diabetes mellitus, purple sweet potato leaf extract, coronary artery histopathology.*