

PENGARUH PEMBERIAN CERSA MORI TERHADAP KADAR GLUKOSA DARAH DAN HISTOPATOLOGI PANKREAS TIKUS PUTIH (*RATTUS NORVEGICUS*) YANG DIINDUKSI ALOKSAN

Melin Novidinisa Herada Putri

Abstrak

Diabetes Mellitus (DM) dapat memicu stress oksidatif dan kerusakan jaringan. Senyawa pati resisten dan flavonoid dalam Cersa Mori memiliki sifat antidiabetik. Penelitian ini dilakukan untuk menganalisis pengaruh pemberian Cersa Mori terhadap kadar glukosa darah dan histopatologi pankreas tikus putih yang diinduksi aloksan. Penelitian ini merupakan penelitian *true-experimental* dengan rancangan *randomized pre-post control group design* untuk glukosa darah dan *only-post control group design* untuk histopatologi pankreas. Sampel pada penelitian ini sebanyak 32 ekor tikus jantan galur *Wistar* dibagi menjadi 4 kelompok secara acak yaitu; (KN) pakan standar dan akuades, (KP1) glibenklamid 0,126 mg/200gBB/hari, (KP2) tepung daun kelor 500 mg/kgBB/hari, (P) Cersa Mori 5g/200gBB/hari. KP1 sampai P diberikan aloksan 125 mg/KgBB secara subkutan dan intervensi dilakukan selama 30 hari. Pengukuran GDP menggunakan metode GOD-PAP dan pengamatan histopatologi pankreas menggunakan mikroskop. Hasil Uji-T Berpasangan menyatakan ada pengaruh Cersa Mori dalam menurunkan GDP tikus hiperglikemia ($P=0,006$) dan *One-Way ANOVA* dilanjutkan dengan uji *Post-Hoc Games-Howell* menyatakan penurunan GDP pada kelompok Cersa Mori (P) setara dengan glibenklamid (KP1) ($P=0,366$). Hasil *One-Way ANOVA* menyatakan ada perbedaan luas pulau *Langerhans* pankreas antar kelompok *post* intervensi ($P=0,000$). Sehingga dapat disimpulkan Cersa Mori berpengaruh terhadap penurunan GDP dan perbaikan histopatologi pankreas.

Kata Kunci: Flavonoid, Histopatologi Pankreas, Kadar Glukosa Darah Puasa, Pati Resisten, Tikus Diabetes

THE EFFECTS OF CERSA MORI ON BLOOD GLUCOSE LEVEL AND PANCREATIC HISTOPATHOLOGY OF ALLOXAN-INDUCED WHITE RATS (*RATTUS NORVEGICUS*)

Melin Novidinisa Herada Putri

Abstract

Diabetes Mellitus (DM) could trigger oxidative stress and caused tissue damage. Resistant starch and flavonoid compounds in the Cersa Mori have an antidiabetic properties. This study aims to analyze the effect of Cersa Mori on fasting blood glucose (FBG) level and pancreatic histopathology of alloxan-induced white rats (*Rattus norvegicus*). The research design was true experimental study with a randomized pre-post control group design for blood glucose level and only post control group design for pancreatic histopathology. Total sample was 32 male rats strain wistar divided into 4 groups randomly, i.e (KN) feed and aquades, (KP1) glibenclamide 0.126 mg/200gBB/day, (KP2) Moringa leaf flour 500 mg/kgBB/day, (P) Cersa Mori 5 g/200gBB/day. KP1 to P were given alloxan 125 mg/KgBB subcutaneously and the intervention was carried out for 30 days. FBG level was measured using the GOD-PAP method and histopathology observation using a microscope. The results of Paired Samples T-Test showed the effect of Cersa Mori on lowering FBG level in hyperglycemic rats ($P=0.006$) and One-Way ANOVA followed with Post-Hoc Games-howell test showed that Cersa Mori (P) can reduce FBG level equal with glibenclamide (KP1) ($P=0,366$). The results of One-Way ANOVA showed that there were significant differences in the area of post-intervention pancreatic *Langerhans* islands ($P=0.000$). So, it can be concluded that Cersa Mori has an effect on lowering FBG level and improving pancreatic histopathology.

Keywords: Diabetics Rats, Fasting Blood Glucose Level, Flavonoid, Pancreatic Histopathology, Resistant Strach