

INTISARI

Andrographis paniculata dan *Phyllanthus niruri* merupakan tanaman herbal yang berpotensi sebagai antidiabetes. Senyawa Andrografolid berefek hipoglikemik sedangkan flavonoid pada *P.niruri* bersifat antioksidan. Hal tersebut mendasari penelitian tentang pengaruh pemberian kombinasi ekstrak etanolik sambiloto dan meniran terhadap kadar glukosa darah dan histopatologi pankreas tikus diabetes melitus.

Hewan uji yang digunakan yaitu tikus Wistar (DM dengan induksi Streptozotosin) usia 2 bulan. Pengujian dilakukan 14 hari dalam 7 kelompok, yaitu: kelompok 1 (kontrol normal); kelompok 2 tikus DM tanpa pengobatan (kontrol negatif), kelompok 3 tikus DM diberi glibenklamid (kontrol positif), kelompok 4 tikus DM diberi meniran dosis tunggal, kelompok 5-7 tikus DM diberi kombinasi ekstrak etanolik sambiloto dan meniran, komposisi 1:1; 1:3; dan 3:1. Sampling darah dilakukan hari ke 0, 7, 14 dan dianalisis profil kadar glukosa darah. Sampling pankreas dilakukan hari ke 14 dan dianalisis tingkat kerusakan sel β berdasar gambaran histopatologi pankreas.

Hasil uji statistik menunjukkan kombinasi ekstrak etanolik sambiloto dan meniran (1:3) dan (1:1) dapat menurunkan kadar glukosa darah tikus DM. Pengamatan histopatologi pankreas juga menunjukkan kondisi pankreas kedua kelompok lebih baik dari kelompok negatif. Dapat disimpulkan bahwa pemberian kombinasi ekstrak etanolik sambiloto dan meniran (1:3) dan (1:1) dapat menurunkan kadar glukosa darah dan memperbaiki sel β pankreas pada tikus DM diinduksi streptozotosin.

Kata kunci: Diabetes melitus, sambiloto, meniran, kadar glukosa darah

ABSTRACT

Andrographis paniculata and *Phyllanthus niruri* L. are herbal plants that have the potential to be antidiabetic. Andrographolide hypoglycemic effects whereas flavonoids in *P.niruri* are antioxidants. This is the basis of the study of the effect of the combination of sambiloto and meniran ethanolic extract on blood glucose levels and histology of pancreatic pancreas in diabetes mellitus.

The test animals used were Wistar rats (DM with Streptozotosin induction) aged 2 months. Tests were carried out 14 days in 7 groups, namely: group 1 (normal control); group 2 DM rats without treatment (negative control), group 3 DM rats were given glibenclamide (positive control), group 4 DM rats were given a single dose, group 5-7 DM rats were given a combination of ethnolic extract of sambiloto and meniran, composition 1: 1; 1: 3; and 3: 1. Blood sampling was carried out on days 0, 7, 14 and analyzed for blood glucose level profiles. Pancreatic sampling was carried out on the 14th day and analyzed for the level of β cell damage based on the histopathology of the pancreas.

The results of statistical tests showed a combination of bitter and meniran ethanolic extract (1: 3) and (1:1) can reduced blood glucose levels in DM rats and pancreatic histopathology data showed that the pancreatic condition of both groups was better than the negative group. It can be concluded that the combination of sambiloto and meniran ethanolic extract (1: 3) and (1:1) can reduce blood glucose levels and improve pancreatic β cells in streptozotosin-induced DM rats.

Keyword : Diabetes mellitus, sambiloto, meniran, blood glucose levels