The Effect of Steeping Robusta Coffee Grounds (*Coffea canephora*) on Fasting Blood Sugar Levels in Diabetes Mellitus Rats

Isni Verawati
Study Program of Clinical Nutrition
Majoring of Health

ABSTRACT

Diabetes Mellitus (DM) is a chronic condition that occurs because insulin cannot work properly, causing insulin resistance and increased blood sugar. One effort to overcome DM is non-pharmacological therapy with robusta coffee powder infusion containing chlorogenic acid and caffeine. The aim is to determine the effect of robusta coffee powder infusion on fasting blood sugar levels in mice with DM. This type of research is True Experimental with a Pretest - Posttest Control Group Design approach. There are 28 male white mice weighing 200-250 grams and aged 2-3 months. There are 4 groups, namely negative control (K-) given standard feed, positive control (K +) given standard feed, induced by STZ. Treatment 1 (P1) was given standard feed, STZ induction, robusta coffee powder infusion with a dose of 4.6 ml / day for 14 days. Treatment 2 (P2) was given standard feed, STZ induction, robusta coffee powder infusion with a dose of 9.2 ml / day for 14 days. The data were analyzed statistically using One Way Anova and Paired T-Test. The results of the fasting blood sugar levels before and after showed that there was no significant difference in the negative control group (K-) and positive control group (K+). While in treatment group 1 (P1) and treatment group 2 (P2) there was a significant difference. According to the results of this study, there was no significant difference between before and after in the negative control group ($p = 0.832$), the positive control group ($p = 0.116$), while in the treatment group (P1) ($p = 0.000$) and (P2) ($p = 0.000$) there was a significant difference. Thus, it can be concluded that fasting blood sugar levels before and after the intervention decreased, but had not reached normal values.

Keyword : Steeping Robusta Coffee Grounds, Diabetes Mellitus, Fasting Blood Sugar.