EFFECTIVENESS OF SOURSOP LEAF EXTRACT TO DECREASE MALONDIALDEHYDE LEVEL

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ABSTRACT

Background: In diabetes mellitus, hyperglycemia causes oxidative stress that enhances the production of free radicals. The presence of higher levels of malondialdehyde (MDA) indicates the rise of free radicals. On the basis of its role as an antioxidant that binds free radicals and reduces the level of malondialdehyde (MDA). Soursop leaf can act as an antidiabetic agent. This study aimed to examine the efficacy of soursop leaf extract (*Annona muricata L.*) to decrease the level of MDA level in alloxan-induced diabetic rats (*Rattus norvegicus*).

Subjects and Method: This was an experiment study using pre- and pro-test with control group design. Total of 30 rats were selected for this study and divided into five groups of treatment i.e. group I was given distilled water and standard feed (Negative Control/KI), group II was given vitamin E 150 IU/kgBW/day (Positive Control/KII), group III was given soursop leaf extract 75 mg/kgBW/day (KIII), group IV was given soursop leaf extract 150 mg/kgBW/day (KIV), and group V was given soursop leaf extract 300 mg/kgBW/day (KV). Each group consisted of 5 rats and was given soursop leaf extract for 21 days after being induced by alloxan and high-fat diet. The data were analyzed using Mann-Whitney test.

Results: There was a significant difference in KI group compared to KII, KIII, KIV, and KV groups. Soursop leaf extract of 150 mg/kgBW/day was the most effective dose to reduce MDA level in pancreatic rat.

Conclusion: Soursop leaf extract of 150 mg/kgBW/day is the most effective dose on pancreatic MDA level reduction.

Keywords: diabetes mellitus, soursop leaf extract, MDA, free radical

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