

Potency Antioxidant Of Pare (*Momordica Charantia L*) As An Antidiabetic In Streptozotocin-Induced Diabetic Male Rat (Sprague Dawley)

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Abstract

Pare fruit extract (EP) has a role as an antioxidant consisting of flavonoid, tannin, saponin, steroid and tripenoid. In vivo analysis was performed in 16 weeks old diabetic male rat with various doses of streptozotocin (STZ). The first hyperglycemic group received doses of STZ 55 mg/kg BW which given in three times intraperitoneal (ip) injection 20-20-15 mg/kg BW, the second group received 35 mg/kgBW which given in single ip injection. STZ induction had resulted in diabetes mellitus (DM) animal model with 325 mg/dl blood glucose level. Other clinical findings also showed human being symptoms such as decreasing of body weight, increasing in water consumption (polydipsi) and increasing in urinate frequency (polyuria). Statistic analysis revealed both weight and elevated blood chemistry level of kidney and liver functions (BUN, Creatinine, SGPT, SGOT, and Triglyceride) compared to negative control group. Pare extract was made from fruit of pare plant and knew as an antioxidant which tended to suppress diabetic condition of rats which had received standard doses (125 mg/kgBW) and high dose (575 mg/kgBW) of pare extract. On the 2nd and 3rd week, the blood glucose level of the first hyperglycemic group reached level 150 mg/dl for standard dose EP and level 125 mg/dl for high dose EP; while the blood glucose level of the second hyperglycemic reached level 275 mg/dl for standard dose EP and level 225 mg/dl for high dose EP. However, potency of pare extract on blood chemistry level of some organ functions, kidney (BUN, Creatinine), Liver (SGOT, SGPT, Triglyceride) was not adequate to give a significant effect. One of the explanation of it could be caused by musking effect phenomenon which related to excessively high blood glucose effect due to diabetic complication. Potency of pare fruit extract on cellular level supported and gave a very consistent result of clinical evaluation findings which explain effectiveness of potency EP on acute and pre-diabetic condition.

Keywords : *Antioxidant, pare extract, hyperglycemia*