

Blood sugar lowering effect of *Coccinia grandis* (L.) J. Voigt: path for a new drug for diabetes mellitus

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Abstract:

BACKGROUND: Role of herbs in the management and control of diabetes has emerged fast over the years. We assessed the efficacy of *Coccinia grandis* (locally known as Ken, Kovakka) leaves as a hypoglycemic agent. **METHODS:** Double-blind phase I clinical trial was conducted at the general hospital and a private hospital in Matara in August 2009. All the participants were given a common meal for dinner, and they maintained a 10-hour fasting period. Sixty-one healthy volunteers were given a meal containing 20 g of leaves of *Coccinia grandis* which was mixed with a measured amount of scraped coconut and table salt for breakfast, and other 61 were given the placebo meal which also contained scraped coconut and salt. Glucose tolerance test was performed blindly for the two groups. Mixed factorial design analysis of variance and student's t-test were applied. **RESULTS:** Overall blood sugar levels of the experimental group were also significantly lower than those of the control group ($F(1,117) 5.56, P < 0.05$). Increase in the blood sugar levels from fasting to one hour ($F(1,117) 6.77, P < 0.05$) and two hours ($F(1,117) 5.28, P < 0.05$) postprandially was statistically significant for participants who were in the control group than those of in the experimental group. The mean difference of postprandial blood sugar levels (mg/dL) after one hour (20.2, 95% confidence interval, 4.81 to 35.5) and two hours (11.46, 95% confidence interval; 1.03 to 21.9) was statistically significant between the two groups. **CONCLUSIONS:** *Coccinia grandis* has a blood sugar lowering effect. However further studies are needed to validate our findings.