Effects of Pandanus Amaryllifolius Leaf Beverage on Postprandial Blood Glucose in Healthy Volunteers

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Abstract

Introduction: Increased postprandial hyperglycemia may cause diabetes mellitus. Pandanus amaryllifolius (PA) leaves are used in traditional medicine for the treatment of diabetes mellitus. This study evaluated effect of PA leaf beverage consumption on postprandial blood glucose in healthy volunteers.

Methods: In randomized crossover trial, 13 healthy volunteers randomly consumed either glucose solution (25 g of glucose powder in 150 ml of water) as control group or PA leaf beverage (2 g of PA leaf powder plus 25 g of glucose powder in 150 ml of water) as PA group. Blood samples were collected before and after the consumption for 2 hours at 30 min (T30), 60 min (T60), 90 min (T90), and 120 min (T120).

Results: Postprandial blood glucose level was increased at T30 in both groups. However, blood glucose level in PA group was significantly lower (p<0.05) compared to control group. Moreover, blood glucose level at T90 was also significantly lower in the PA group (p<0.05).

Conclusions: The knowledge gained from this study suggests that PA leaf beverage consumption could attenuate postprandial blood glucose in healthy volunteers. It could be applied as an alternative medicine for the treatment of diabetes mellitus.

Keywords: Pandanus amaryllifolius, beverage consumption, blood glucose, diabetes mellitus