Attenuation of Postprandial Hyperglycemia in Healthy Subjects Ingesting Gel of Premna serratifolia L. Leaves Thirty Minutes Prior to Consumption of Glucose

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Abstract

Premna serratifolia L. leaves are used to make local jelly dessert, unique to West Java Province population. The leaves have pectin include saponin, flavonoid, alkaloid and magnesium claimed to control blood sugar of diabetics. The purpose of this study was to investigate the antihyperglycemic effect of these leaves on blood sugar change profile in normoglycemic subjects. Thirty healthy students were selected by purposive sampling. Glucose tolerance method was used, carried out in three experiments separated by a one-week washout period. Subjects were asked to fast for 8-10 hours in the evening prior to each experiment, and then checked for fasting blood glucose. For the experiment one, the participants were given, the standard 75 g of food grade D (+)-glucose monohydrate solution. Blood glucose was then checked at 30, 60, 90 and 120 minutes postprandial. In experiment two the same protocol was done for the except that the glucose was consumed thirty minutes before the ingestion of glucose. As for the third experiment grass jelly made of 100 g of *Premna serratifolia L.* leaves was administered, instead glucose solution. Statistical analysis with t-Test showed insignificant antihyperglycemic effect at 30 minutes ($p = 0.071$), and but significant effect at 60, 90 and 120 minutes ($p = 0.000$) postprandial. It is concluded that the gel of *Premna serratifolia L.* leaves has postprandial antihyperglycemic effects among healthy subjects. It is recommended that the same study be done on diabetic patients.

Keywords: *green cincau, Premna serratifolia L., antihyperglycemia, postprandial blood glucose*