Comparing the effect of sticky rice and white rice on glycemic control in type 2 diabetic subjects.

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BACKGROUND: Many studies have documented the health benefits that can be obtained selecting foods of low glycemic index. These benefits are of crucial importance in the dietary treatment of diabetes mellitus. Sticky rice (Oryza glutinosa) is the main carbohydrate source for Thais in the North and North-Eastern area. This kind of rice is known to have higher glycemic index (GI) than the white rice (Oryza sativa) and may have low satiety satisfaction.

OBJECTIVE: The present study examined the possible difference in glycemic control indicated by glycated hemoglobin (HbA1c) in patients with type-2 diabetes who eat sticky rice versus white rice.

DESIGN: One hundred and seven overweight to mildly obese type-2 diabetes patients, age of 45-65 years, whose duration of diabetes less than three years and whose diabetes was controlled with medical nutrition therapy and/or sulfonylurea only, were interviewed for 24-hour food recall and seven day food frequencies. Demographic data were collected and venous blood collected for HbA1c measurement. Patients who consumed sticky mainly rice were defined by eating sticky rice at more than half of the meals during one week, and the others were defined as eating mainly white rice.

Results: Sixty six percent of diabetic patients in this population consumed mainly sticky rice. There was no significant difference between the patients who eat mainly sticky rice and white rice according to age, sex, BMI, exercise frequencies, sulfonylurea doses. Patients who consumed sticky rice had higher HbA1c (8.94% vs. 8.04%, p=0.025), daily carbohydrate calories (p<0.001) and total daily caloric intake (P<0.001) than those who consumed white rice mainly. Consumption of sticky rice was a predictor of poor diabetic control defined by HbA1c>7% (OR=3.22, CI=1.01-10.25) independent to daily carbohydrate calories and total daily caloric intake. In linear regression analysis, difference in rice consumption was a significant predictor of HbA1c (p=0.047) independent to age, sex, BMI, daily carbohydrate calories and total daily caloric intake.

CONCLUSIONS: Eating sticky rice frequently may worsen diabetic in the long term due to higher glycemic index or more caloric intake due to less satisfaction. Since most diabetic patients in this population consumed mainly sticky rice, there should be consideration of more intensively nutritional recommendations to reduce consumption of sticky rice for patients with poor diabetic control.

This study was supported by a grant from Thai government budget through Chiang Mai University and was approved by The Human Experimentation Committee, Research Institute for Health Sciences, Chiang Mai University.

Poster presentation in Annual Meeting Mahidol Day, 24 September 2003