Evaluation of Dietary Habits and Nutritional Knowledge in Thai Patients with Type 2 Diabetes Mellitus Revealed High Added Sugar and Very Low Dietary Fiber Intake Pattern

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Background: Most nutritional recommendations for diabetes patients are emphasized on individualized advice. However, there is a dearth of information on the dietary intakes and nutritional knowledge of Thai patients with type 2 diabetes mellitus (T2DM).

Objectives: This study aimed to clarify dietary habits and nutritional knowledge in relationship to glycemic control among Thai patients.

Materials and Methods: A cross-sectional study was performed in Thai T2DM outpatients using dietary assessment and nutrition knowledge survey. Dietary intake was assessed using 72-hour food records. Diabetic nutritional knowledge was also evaluated based on validated Theptarin DM questionnaire.

Results: A total of 304 diabetes patients (females 52.6%, mean age 57.4±10.9 years, body mass index 27.3±4.8 kg/m2, median duration of diabetes 10 years, baseline HbA1c 7.2±1.3%, and insulin treatment 21.7%) participated in the study. The mean calorie intake was 1427±425 kcal/d and mean intake for each macronutrient was acceptable (Carbohydrate 52%, Protein 17%, Fat 31%). The intakes of saturated fat and added sugar were much higher, whilst dietary fiber intake was much lower than recommended. Added sugar contributed to 12.1±5.8% of total daily energy intake. Approximately 8.6% of patients consumed added sugar less than 5% of total energy. Only 2% of patients met recommendations for dietary fiber intake (≥14 g per 1000 kcal). The subset of patients (N =213) completed diabetic nutritional knowledge survey. There was no relationship between diabetic nutritional knowledge and glycemic control (r = -0.031, p-value = 0.649). Moreover, no association was noted between glycemic control and amounts of carbohydrate intake, protein intake, fat intake, or dietary fiber intake.

Conclusions: The compliance of Thai diabetes patients show no complete satisfactory to dietary recommendations, especially with high intakes of added sugar and saturated fat as well as very low intakes of dietary fiber intake. Whereas, dietary self-care behaviors are not intuitive. Thus, individualized dietitian-led nutrition education session should be incorporated into their routine diabetes care. The addressing on how T2DM patients actually eat in daily life and their knowledge gaps would enable them to adhere to medical nutrition therapy. Meanwhile, fiscal policies should also target on foods and beverages, for which healthier alternatives are available in Thai type 2 diabetic patients.

Keywords: Dietary Habits, Nutritional Knowledge, Type 2 Diabetes Mellitus