

The association of Body Mass Index, energy and carbohydrate consumption level with blood glucose in patients with Type II Diabetes Mellitus (DM)

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ABSTRACT

Background: Lifestyle changing, especially in big cities, lead to the increase of degenerative diseases prevalences, such as Coronary Heart Disease (CHD), hypertension, hyperlipidemia and diabetes mellitus. Compared to other types, type II DM is the most prevalent. Body mass index is positively related to the increase risk of Type II Diabetes Mellitus. Food consumption directly influences reduction and increasing blood glucose level. This research is aimed to examine the association of Body Mass Index, energy and carbohydrate consumption with blood glucose in patients with Type II Diabetes Mellitus. **Method:** An explanatory research with a cross sectional study was conducted on 37 eligible people, which are taken in purposively. Data on blood glucose level were taken from medical record, energy and carbohydrate consumption were collected with interview. The independent variables were Body Mass Index, energy and carbohydrate consumption level; meanwhile the dependent variable is blood glucose level. Pearson Product Moment Correlation was used to show the association between variables.

Result: All sample had high blood glucose level (>140 mg/dl) with mean $196,8$ mg/dl $\pm 54,68$. The mean of Body Mass Index was $25,3$ kg/m² $\pm 4,45$, energy consumption level $121,7$ % $\pm 23,89$ and carbohydrate consumption level $105,7$ % $\pm 28,55$. Body Mass Index was significantly associated with blood glucose level ($r = 0,863$; $p = 0,00$). Energy consumption level was significantly associated with blood glucose level ($r = 0,467$; $p = 0,004$). Carbohydrate consumption level was significantly associated with blood glucose level ($r = 0,397$; $p = 0,015$),

Conclusion: There are significant associations between Body Mass Index, energy and carbohydrate consumption level with blood glucose level in patients with Type II Diabetes Mellitus.

Keyword: Body Mass Index, energy consumption level, carbohydrate consumption level, blood glucose level, patients with type II Diabetes Mellitus.