ABSTRACT

The Role of Insulin Resistance to Patient with Diabetes Risk and No Diabetes Mellitus Risk in a Clinic at Muhammadiyah University of Surabaya

Insulin resistance/decreased sensitivity have important role in pathogenesis of incidence of type 2 diabetes mellitus was estimated to be 90-95%. Development of insulin resistance glucose metabolism disorders occurs gradually started from weight gain and obesity, related to incidence of diabetes. This research aims to find out the difference of insulin resistance on patient with diabetes mellitus risk and no diabetes mellitus risk conducted in clinic at Muhammadiyah University of Surabaya.

This study was an observational analytic by using cross-sectional approach and simple random sampling. There were 23 patients, 10 patients with diabetes mellitus risk and other 13 patients with no diabetes mellitus risk. Observation had been conducted once for long time observation. This research took in June 2016. Measuring insulin resistance was established by quantify fasting blood glucose and fasting insulin. Blood collection was taken by Parahita laboratory staff after respondent had fasting minimum 8 hours. Data collection of height and weight was carried out before serum blood test then proceed with FFQ (Food Frequency Questionnaires). Respondents were gathered in one place to collect data. The data were analyzed by t-test for a differences and chi-square test.

This conclusion was significant difference of insulin resistance in patient with diabetes mellitus risk and no diabetes mellitus risk by using t-test free sample result p<0.05 (p=0.014). Fasting blood glucose, fasting insulin, and Homa IR shows significant differences but still normal.

Health problems especially for Non-Communicable Disease (NCD) require early prevention. Controlling eating habit and physical exercise was needed for preventing Diabetes Mellitus.
Keywords: Insulin resistance, fasting insulin, risk and no risk of diabetes mellitus