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Submission date: 18-Feb-2021 04:18AM (UTC+0800)

Submission ID: 1511734865

File name: C-26.pdf (114.82K)

Word count: 422

Character count: 2396

PO360

IS PROSTATIC SERUM ANTIGEN CORRELATED WITH INSULIN RESISTANCE IN MEN WITH TYPE 2 DIABETES MELLITUS-METS

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Background: Metabolic syndrome (MetS) is a cluster of cardiovascular risk factors that includes hypertension, diabetes mellitus, obesity, hypertriglyceridemia, and low high-density lipoprotein cholesterol, with insulin resistance as the underlying hallmark feature. The prevalence of MetS has been increasing worldwide and has become a major public health problem in many western countries. Recently, increasing evidences suggests that MetS may be involved in the development and progression of certain types of cancer as an independent etiologic factor including breast cancer, endometrial cancer, colorectal cancer, pancreatic cancer and prostate cancer. MetS was firstly observed as a composite factor associated with prostate cancer risk in 2004, and more studies have since reported the association between MetS and prostate cancer. In biologic models proposed to explain this association, researchers note the higher concentrations of insulin and insulin-like growth factor 1 (IGF-1) in early diabetes and the lower testosterone and IGF-1 levels and higher estrogen concentrations in long-term diabetes. Whether diabetes influences levels of biomarkers such as Prostate-Specific Antigen (PSA), which is involved in the detection of prostate cancer, is still unknown. Factors influencing serum PSA levels in men include age, benign prostatic hyperplasia, prostatitis, and Body Mass Index (BMI). In this study, we examined whether PSA on the person who have insulin resistance which is often happen in men with Type 2 Diabetes Mellitus- Metabolic Syndrome.

Method: This cross sectional study was performed in Surabaya private clinic. Study period was six months between January to June 2014. Plasma concentrations of glycated haemoglobin (HbA1c) and fasting and post-prandial glucose were analysed and homeostatic model assessment of insulin resistance (HOMA-IR) were calculated. HOMA-

IR value more than 2.0 is considered to be positive for IR. Statistical analysis was performed using SPSS 17.0 and Spearman's test.

Result: Fifty two male subjects were enrolled in this study. The mean age was 62.32 ± 8.72 years old, fasting blood sugar 139.68 ± 43.65 mg/dL, mean A1C $7.89 \pm 1.80\%$, the mean HOMA-IR 7.14 ± 4.77 , and the mean of PSA value was 3.76 ± 1.99 ng/dL. The PSA showed negative correlation with Insulin Resistance ($r = -0.049$; $p < 0.005$).

Conclusion: The level of PSA had negative correlation with insulin resistance among men with T2DM-MetS in this study.

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