PO361 Testosteron Level and Insulin Resistance in Men With Type 2 Diabetes Mellitus-Metabolic Syndrome

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TESTOSTERON LEVEL AND INSULIN RESISTANCE IN MEN WITH TYPE 2 DIABETES MELLITUS-METABOLIC SYNDROME

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Background: Testosterone deficiency often occurs in people with type 2 diabetes mellitus (T2DM) where it contributes to mood and libido disturbances. Total testosterone levels inversely associated with insulin resistance, a factor which has the potential to provide micro and macro vascular complications in patients with T2DM. Several studies in men showed that testosterone supplementation can improve insulin sensitivity conditions. Recent studies have reported that 20–64% of men with testosterone deficiency/hypogonadism also have T2DM. The proportion of men who have both T2DM and hypogonadism increases in older groups of men. Men who have slightly reduced total testosterone level, but not low enough to be considered as testosterone deficiency are also more likely to have lowinsulin and high blood glucose levels. This study will examine the correlation between total testosterone level and insulin resistance in men with T2DMMetS.

Method: This cross sectional studywas performed in Surabaya private clinic. Study period was six months between January to June 2014. The variables include: fasting blood sugar, 1 hour post prandial, A1C, HOMA-IR and levels of the total testosterone was measured by radioimmunoassay technique. Low testosterone for patient with T2DM was defined as below 400 ng/dL and normal if above 400 ng/dL. HOMA-IR value more than 2.0 is considered to be positive for IR. Patients on testosterone replacement, and corticosteroids were excluded from this study. Statistical analysis was performed using SPSS 17.0 and Spearmen's test.
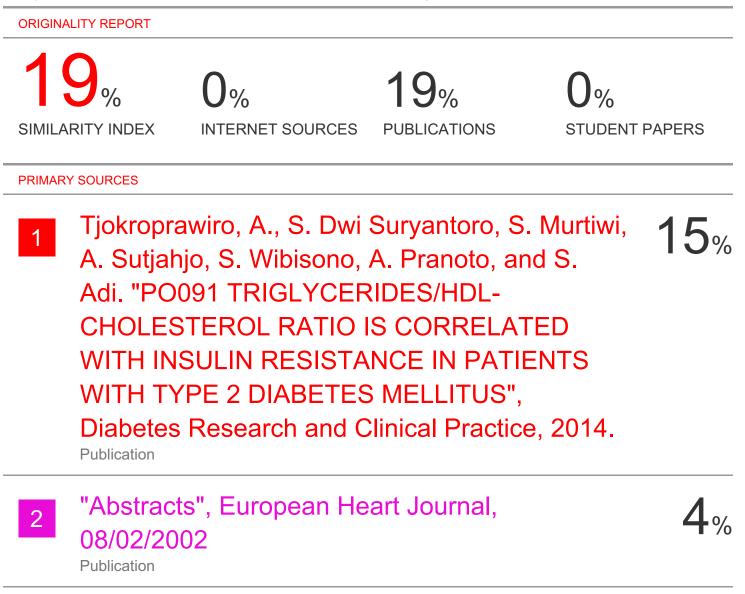
Result: Fifty two male subjects were enrolled in this study. The mean age was 62.32±8.72 years old, fasting blood sugar 139.68±43.65 mg/dL, blood glucose 1 hour post prandial 255.56±112.06 mg/dL, mean A1C 7.89±1.80%, the mean HOMA-IR 7.14±4.77, while the

mean testosterone levels 315.39±251.30 ng/dL. The statistical analysis showed inverse correlation between total testosterone levels and insulin resistance (r: −0.215, p: 0.034)

Conclusion: There was a significant inverse correlation between total testosterone level and insulin resistance in this study.

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