

INTISARI

KORELASI KADAR HORMON TESTOSTERON TOTAL TERHADAP SKOR FUNGSI EREKSI PADA PENYANDANG DIABETES MELITUS TIPE 2 DI KLINIK ENDOKRIN RSUP DR SARDJITO

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Latar Belakang: Disfungsi Ereksi merupakan salah satu komplikasi penting pada Diabetes Melitus (DM) tipe 2 dengan etiologi multifaktorial. Beberapa penelitian sebelumnya telah menemukan peranan testosteron dalam patogenesis Disfungsi Ereksi pada Diabetes. Testosteron memiliki peran hampir pada seluruh komponen dalam regulasi fungsi ereksi pria. Saat ini, belum ada penelitian yang mencari korelasi antara kadar hormon Testosteron Total dengan skor fungsi ereksi pada penyandang DM tipe 2 di Indonesia.

Tujuan Penelitian: Mengetahui korelasi antara kadar hormon Testosteron Total dengan skor fungsi ereksi pada penyandang DM tipe 2.

Metode Penelitian: Penelitian observasional dengan pendekatan potong lintang yang melibatkan 77 penyandang DM di klinik Endokrin RSUP Dr. Sardjito pada bulan Maret hingga April 2020. Data karakteristik dasar diambil melalui wawancara singkat dan catatan medik. Fungsi ereksi dievaluasi menggunakan kuesioner *International Index of Erectile Function-5* (IIEF-5) versi Bahasa Indonesia yang telah tervalidasi. Pemeriksaan Testosteron Total dilakukan di Instalasi Laboratorium Klinik RSUP Dr. Sardjito setelah subjek berpuasa selama minimal 8 jam dengan menggunakan metode *electrochemiluminescence assay* (ECLIA) kompetitif. Analisis data dengan menggunakan perangkat lunak SPSS versi 22 dengan nilai kemaknaan $p < 0,05$ dan interval kepercayaan 95%.

Hasil Penelitian: Pada studi ini ditemukan frekuensi DE sebesar 97,14% yang sebagian besar mengalami DE sedang-berat. Kadar TT rendah yakni $TT \leq 12,0$ nmol/L, ditemukan pada 21,43% subjek penelitian dengan rerata kadar hormon TT sebesar $16,59 \pm 5,86$ nmol/L. Uji korelasi Pearson's menunjukkan adanya korelasi positif antara kadar TT dengan skor IIEF-5 ($r = 0,433$; $p = 0,000$) dan korelasi negatif antara usia dengan skor IIEF-5 ($r = -0,260$; $p = 0,030$). Analisis multivariat regresi linear menunjukkan hasil pengaruh gabungan antara kadar TT dan usia memiliki koefisien determinasi sebesar 24% menjelaskan variasi nilai skor fungsi ereksi (uji $F = 10,59$; $p = 0,000$)

Kesimpulan: Kadar hormon Testosteron Total rendah berkorelasi dengan penurunan fungsi ereksi yang ditandai dengan skor fungsi ereksi yang lebih rendah.

Kata kunci: Disfungsi Ereksi, Diabetes Melitus, Testosteron, IIEF-5

ABSTRACT

CORRELATION OF TOTAL TESTOSTERONE HORMONE WITH ERECTILE FUNCTION SCORE IN TYPE 2 DIABETES MELLITUS AT ENDOCRINOLOGY CLINIC OF DR SARDJITO HOSPITAL

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Backgrounds: Erectile Dysfunction (ED) in an important complication of Type 2 Diabetes Mellitus (T2DM) with multifactorial etiology. Previous studies have founded the role of low testosterone level in the pathogenesis of Diabetic ED. Testosterone plays important role in almost all levels in the regulation of erectile function. To date, there is no study aiming to evaluate the correlation of total testosterone (TT) hormone with erectile function score in T2DM.

Objective: To evaluate the correlation between TT hormone and ED score in T2DM.

Methods: A Cross-sectional study including 77 men having T2DM was conducted at Endocrinology Clinic of Sardjito Hospital during April 2020. Baseline characteristics data was collected from short interview and medical record. Subjects were evaluated for the symptoms of ED using a validated Indonesian-translated five-items version of The International Index of Erectile Function-5 (IIEF-5) questionnaire. Testosterone total was measured by competitive electrochemiluminescence assay (ECLIA) method at the Clinical Laboratory of Sardjito Hospital. The minimum eight hours fasting was required for blood sample collection. Data were analyzed using the statistical package for social science (SPSS) version 22. The Confidence interval was set to 95% and *P*-value was considered significant at the level of <0.05 .

Results: ED was found in 97.14% of studied men, where most of them were in moderate to severe form of ED. Low TT level was defined by $TT \leq 12.0$ nmol/L, was found in 21.43% of studied men with mean of TT level was 16.59 ± 5.86 nmol/L. Pearson's correlation analysis revealed a positive correlation between TT and IIEF-5 score ($r=0.433$; $p=0.000$) and negative correlation between age and IIEF-5 score ($r= -0.260$; $p=0.030$). Multivariate analysis revealed a combination of TT and age has a coefficient determination of 24% to explain the variation of erectile function score ($F=10.59$; $p=0.000$)

Conclusion: This study demonstrated that low TT level has significant correlation with lower erectile function score (decrease erectile function).

Keywords: Erectile Dysfunction, Diabetes Mellitus, Testosterone Total, IIEF-5