

ABSTRAK

PERBEDAAN KADAR D-DIMER PLASMA ANTARA PENYAKIT ARTERI PERIFER DAN BUKAN PENYAKIT ARTERI PERIFER PADA DIABETES MELITUS TIPE 2

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Latar belakang. D-dimer merupakan *marker global* dari *turnover cross-linked fibrin* dan aktivasi sistem hemostasis. D-dimer mempunyai efek pada proses inflamasi dan respon protein fase akut. Kadar D-dimer yang meningkat menunjukkan keadaan hiperkoagulasi. Penyakit arteri perifer merupakan suatu penyakit yang berhubungan dengan inflamasi dan hiperkoagulasi. Penelitian ini bertujuan untuk mengetahui apakah ada perbedaan proporsi kadar D-dimer penderita diabetes melitus tipe 2 dengan penyakit arteri perifer dan tanpa penyakit arteri perifer.

Metode. Penelitian ini merupakan penelitian potong lintang. Semua penderita DM tipe 2 rawat jalan dipoliklinik Endokrin RSUP Dr. Sardjito yang berumur >50 tahun dan menanda tangani *informed consent* diikutsertakan pada penelitian ini. Penyakit arteri perifer didiagnosis dengan menggunakan nilai *ankle brachial index* $\leq 0,90$. Variabel umur, jenis kelamin, status merokok, lama diabetes, kadar lipid darah, HbA1c, tekanan darah, kadar D-dimer dibandingkan antara kelompok penyakit arteri perifer dengan kelompok tanpa penyakit arteri perifer.

Hasil. Dari 60 subyek yang memenuhi kriteria didapatkan 20 subyek (33,3%) menderita penyakit arteri perifer. Variabel yang berbeda antara kelompok penyakit arteri perifer (PAP) dan kelompok bukan penyakit arteri perifer adalah jenis kelamin wanita dan usia, sedang variabel lainnya tidak berbeda secara signifikan. Jenis kelamin wanita pada kelompok penyakit arteri perifer mempunyai proporsi 80,0% dibanding pria 20,0% ($\chi^2 = 8,571$, $p = 0,003$). Rerata umur kelompok PAP dibanding kelompok bukan PAP adalah $64,9 \pm 6,7$ tahun *versus* $61,3 \pm 6,6$ tahun, $t = 2,018$, $p = 0,048$. Didapatkan perbedaan proporsi kadar D-dimer ≥ 100 ng/ml antara kelompok PAP dan kelompok bukan PAP (55% versus 25%, $p = 0,022$).

Simpulan. Didapatkan perbedaan proporsi kadar D-dimer plasma ≥ 100 ng/ml yang signifikan antara PAP dan bukan PAP pada diabetes melitus tipe 2.

Kata kunci: Diabetes melitus, D-dimer, penyakit arteri perifer

ABSTRACT

THE DIFFERENCE OF PLASMA D-DIMER LEVEL BETWEEN PERIPHERAL ARTERIAL DISEASE AND NON PERIPHERAL ARTERIAL DISEASE IN TYPE 2 DIABETES MELLITUS

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Background. D-dimer is a global marker of fibrin turnover cross-linked and haemostasis system activity. It has effect to inflammation process and acute phase protein response. Increase of D-dimer level shows hypercoagulability state. Peripheral arterial disease is a disease that was associated with inflammation process and hypercoagulability state. This study was performed to determine the difference of proportion plasma D-dimer level ≥ 100 ng/ml between peripheral arterial disease and non peripheral arterial disease in type 2 diabetes mellitus patients.

Methods. This study is a cross sectional study. All type 2 DM outward patients at Endocrinology clinic of Dr. Sardjito General Hospital, age >50 years old and agreed to participate by signing informed consent were included in this study. Peripheral arterial disease was diagnosed by using ankle brachial index value ≤ 0.90 . Variables such as age, sex, smoking status, diabetes duration, plasma lipid levels, HbA1c, blood pressure, D-dimer level were compared between two group patients (peripheral arterial disease and non peripheral arterial disease).

Result. From 60 subjects who fulfilled criteria, 20 subjects (33.3%) had peripheral arterial disease. Variables that significantly different between two groups were women, age, and other variables were not significantly different. Proportion women with peripheral arterial disease was about 80.0% compared to 20.0% in men ($\chi^2=8.571$, $p=0.003$). Mean age in patient with peripheral arterial disease group was 64.9 ± 6.7 years compared to 61.3 ± 6.6 years in non peripheral arterial disease patient group, with $t=2.018$ and p value 0,048. There was difference of D-dimer proportion ≥ 100 ng/ml in peripheral arterial disease and non peripheral arterial disease as much 55% versus 25%, $p=0.022$.

Conclusion. There was significantly proportion difference of plasma D-dimer level ≥ 100 ng/ml between peripheral arterial disease and non peripheral arterial disease in type 2 diabetes mellitus.

Keywords. Diabets mellitus, D-dimer, peripheral arterial disease.