

Korelasi antara kadar tumor necrosis factor alpha, kadar free fatty acid dan kadar vascular cell adhesion molecule-1 pada pasien artritis reumatoid = Correlation between tumor necrosis factor alpha level free fatty acid level and vascular cell adhesion molecule 1 level in rheumatoid arthritis patient

Fazria Nasriati, author

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Abstrak

Nama : Fazria Nasriati
Program studi : Ilmu Penyakit Dalam
Judul : Korelasi Antara Kadar Tumor Necrosis Factor- α , Kadar Free Fatty Acid, dan Kadar Vascular Cellular Adhesion Molecule-1 Pada Pasien Artritis Reumatoid
Latar Belakang: Mortalitas Artritis Reumatoid cukup tinggi, dimana sebagian besar disebabkan oleh komplikasi kardiovaskular yang disebabkan oleh proses disfungsi endotel. Salah satu mediator inflamasi penting yang berperan terhadap kerusakan sendi pasien AR yaitu TNF- α , juga terbukti berperan dalam proses disfungsi endotel serta berperan meningkatkan lipolisis intraselular sehingga meningkatkan kadar FFA yang bersirkulasi.
Tujuan: Mengetahui korelasi antara kadar TNF- α dengan kadar VCAM-1, korelasi kadar TNF- α dengan kadar FFA, serta korelasi kadar FFA dengan kadar VCAM-1.
Metode: Penelitian desain cross sectional dan retrospektif terhadap pasien AR dewasa yang berobat di Poliklinik Reumatologi Rumah Sakit Cipto Mangunkusumo RSCM, tanpa gangguan metabolik, infeksi akut, gangguan kardiovaskular, maupun penyakit autoimun lain. Pengumpulan data cross sectional dilakukan pada rentang bulan Oktober hingga November 2017, sedangkan sampel retrospektif telah dikumpulkan sejak Agustus 2016. Kadar TNF- α , VCAM-1, dan FFA dinilai melalui pemeriksaan darah serum dengan metode ELISA. Analisis korelasi dilakukan dengan analisis Pearson bila sebaran data normal dan dengan analisis Spearman bila sebaran data tidak normal.
Hasil Penelitian: Sebanyak 35 orang subjek diikutsertakan dalam penelitian ini. Sebagian besar 97,1 merupakan perempuan dengan rerata usia 45,29 tahun, median lama sakit 48 bulan, dan sebagian besar memiliki derajat aktifitas penyakit sedang 65,7. Tidak didapatkan adanya korelasi antara kadar TNF- α dengan kadar VCAM-1 $p = 0,677$; $r = 0,073$. Korelasi antara kadar FFA dengan kadar VCAM-1 memperlihatkan adanya korelasi yang bermakna dengan arah korelasi negatif dan kekuatan korelasi lemah $p = 0,036$; $r = -0,355$. Korelasi antara kadar TNF- α dan kadar FFA memiliki arah negatif dan kekuatan korelasi yang lemah dengan hubungan yang tidak bermakna $p = 0,227$; $r = -0,21$.
Kesimpulan: 1 Belum terdapat korelasi antara kadar TNF- α dengan kadar VCAM-1 pada pasien AR; 2 Belum terdapat korelasi antara kadar TNF- α dengan kadar FFA pada pasien AR; 3 Terdapat korelasi negatif antara kadar FFA dengan kadar VCAM-1 pada pasien AR.
Kata Kunci : Tumor Necrosis Factor- α , Free Fatty Acids, Vascular Cell Adhesion Molecule-1, Artritis Reumatoid.

.....Name Fazria Nasriati
Study Program Internal Medicine
Title Correlation Between Tumor Necrosis Factor levels, Free Fatty Acid Levels, and soluble Vascular Cell Adhesion Molecule 1 Levels in Rheumatoid Arthritis Patients.
Backgrounds The mortality of Rheumatoid arthritis RA is quite high, which is largely due to cardiovascular complications caused by endothelial dysfunction. One of the important inflammatory mediators that contribute to AR joints arthritis of TNF, also proven to play a role in endothelial dysfunction and play a role in increasing intracellular lipolysis, thus increasing circulating FFA levels.
Objectives To determine the correlation between TNF levels with VCAM 1 levels, correlation of TNF levels with FFA

levels, and correlation of FFA levels with VCAM 1 levels. Methods Cross sectional and retrospective design studies of adult AR patients treated at Cipto Mangunkusumo Hospital RSCM, without metabolic disturbances, acute infection, cardiovascular disorders, or other autoimmune diseases. The cross sectional data was collected from October to November 2017, while retrospective samples were collected since August 2016. TNF, VCAM 1, and FFA levels were assessed by serum blood test by ELISA method. Correlation analysis is done by Pearson analysis when the data distribution is normal and with Spearman analysis when the data distribution is not normal. Results A total of 35 subjects were enrolled in the study. Most 97.1 were women with an average age of 45.29 years, median duration of 48 months, and most had moderate disease status 65.7. No correlation was found between TNF levels and VCAM 1 levels $p = 0.677$ $r = 0.073$. The correlation between FFA and VCAM 1 levels showed significant correlation with negative correlation and weak correlation $p = 0.036$ $r = 0.355$. The correlations between TNF levels and FFA levels had negative direction and weak correlation strength with non significant associations $p = 0.227$ $r = 0.21$. Conclusions 1 There was no correlation between TNF levels and VCAM 1 levels in AR patients 2 There was no correlation between TNF levels and FFA levels in AR patients 3 There was a negative correlation between FFA levels and VCAM 1 levels in AR patients. Keywords Tumor Necrosis Factor, Free Fatty Acids, Vascular Cell Adhesion Molecule 1, Rheumatoid Arthritis.