Hubungan Kadar Endothelin-2 Serum dengan Komplikasi Kardiovaskular Mayor selama Perawatan Intensif
pada Pasien Infark Miokard Akut ST Elevasi
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HUBUNGAN KADAR ENDOTHELIN-2 SERUM DENGAN KOMPLIKASI KARDIOVASKULAR MAYOR SELAMA PERAWATAN INTENSIF PADA PASIEN INFARK MIOKARD AKUT ST ELEVASI

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INTISARI

Latar belakang: Prevalensi infark miokard akut mencapai tiga juta orang di seluruh dunia. Infark miokard dapat dibagi menjadi dua kategori, yaitu infark miokard akut tanpa ST elevasi (NSTEMI) dan infark miokard akut ST elevasi (STEMI). Pasien dengan riwayat penyakit kardiovaskular memiliki risiko tinggi mengalami komplikasi kardiovaskular mayor. Faktor risiko non-tradisional seperti disfungsi endotel dianggap sebagai prediktor penting untuk *outcome* pasien. Menurut penelitian sebelumnya, kadar endothelin-1 serum pada pasien STEMI telah terbukti menjadi variabel yang signifikan untuk memprediksi kejadian komplikasi kardiovaskular mayor. Namun, penelitian mengenai hubungan antara kadar endothelin-2 serum pada pasien STEMI dengan kejadian komplikasi kardiovaskular mayor belum pernah di lakukan.
Tujuan: Untuk mengetahui hubungan antara kadar endothelin-2 serum dengan kejadian komplikasi kardiovaskular mayor pada pada pasien STEMI
Metode: Penelitian ini adalah penelitian observasional. Desain penelitian merupakan penelitian kohort. Penelitian ini merupakan analisis dari penelitian payung sebelumnya. Diperoleh 61 subjek pasien STEMI dari Instalasi Gawat Darurat dan Instalasi Rawat Jantung Intensif RSUP Dr. Sardjito yang memenuhi kriteria penelitian. Kadar serum endothelin-2 diukur dengan ELISA *sandwich*. Analisis uji *Mann-Whitney* dilakukan untuk mengetahui perbedaan kadar endothelin-2 antara dua kelompok penelitian.
Hasil: Nilai median kadar endothelin-2 pada keseluruhan subjek penelitian adalah 2,27 pg/ml. Kelompok dengan komplikasi kardiovaskular mayor berjumlah 16 orang (26,2%) sedangkan pada kelompok tanpa komplikasi kardiovaskular mayor berjumlah 45 orang (73,7%). Nilai median pada kelompok dengan komplikasi kardiovaskular mayor adalah 2,00 pg/ml sedangkan pada kelompok tanpa komplikasi kardiovaskular mayor sebesar 2,27 pg/ml dengan nilai p = 0,583.
Kesimpulan: Tidak terdapat perbedaan rerata kadar endothelin-2 serum yang bermakna secara statistik antara kelompok dengan komplikasi kardiovaskular mayor dan kelompok tanpa komplikasi kardiovaskular mayor pada pasien STEMI.

Kata kunci: STEMI, komplikasi kardiovaskular mayor, endothelin-2

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CORRELATION BETWEEN SERUM ENDOTHELIN-2 LEVEL WITH MAJOR ADVERSE CARDIAC EVENTS DURING INTENSIVE TREATMENT ON PATIENT WITH ACUTE ST ELEVATION MYOCARDIAL INFARCTION

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ABSTRACT

Background: The prevalence of acute myocardial infarction reaches three million people worldwide. Myocardial infarction can be devided into two categories, they are acute non-ST elevation myocardial (NSTEMI) infarction and acute ST elevation myocardial infarction. Patients with a history of cardiovascular disease have a high risk of developing major adverse cardiac events. Non-traditional risk factors such as endothelial dysfunction are considered an important predictor of patient outcomes. According to previous study, serum endothelin-1 levels in STEMI patients have been shown to be a significant variable for predicting the incidence of major adverse cardiac events. However, study on the correlation between serum endothelin-2 levels in STEMI patients with major adverse cardiac events has never been done.
Objective: To determine the correlation between serum endothelin-2 levels and the incidence of major adverse cardiac events in STEMI patients.
Methods: This study was an observational study. The study design was a cohort study. This study was an analysis from the previous study. There were 61 subjects of STEMI patients from the Emergency Department and Intensive Cardiac Care Unit of Dr. Sardjito who met the study criteria. Serum endothelin-2 levels were measured by sandwich ELISA method. Mann-Whitney test analysis was performed to determine the difference in endothelin-2 levels between the two study groups.
Results: The median value of endothelin-2 levels in all study subjects was 2.27 pg/ml. In the group with major adverse cardiac events there were 16 people (26.2%) while in the group without major adverse cardiac events there were 45 people (73.7%). The median value in the group with major adverse cardiac events was 2.00 pg/ml while in the group without major adverse cardiac events was 2.27 pg/ml with a p value of 0.583.
Conclusion: There were no statistically significant difference in serum endothelin-2 levels between groups with major adverse cardiac events and groups without major adverse cardiac events in STEMI patients.

Keywords: STEMI, major adverse cardiac events, endothelin-2