Hubungan Polimorfisme Gly972Arg Gen Insulin Receptor Substrate 1 (IRS1) dengan TIMI Flow Pasca Intervensi Koroner Perkutan Primer (IKPP) dan Jumlah Kelainan Pembuluh Koroner pada Infark Miokard Akut Elevasi Segmen ST (IMA-EST) = The Association between Gly972Arg Polymorphism of Insulin Receptor Substance 1 Gene and TIMI Flow After Primary Percutaneous Coronary Intervention and Coronary Multivessel Involvement in Patients with Acute ST-Segment Elevation Myocardial Infarction

Harry Mahathir Akip, author

Abstrak

Latar belakang: Polimorfisme Gly972Arg pada gen IRS1 dapat mengganggu fungsi normal endotel dan menyebabkan disfungsi endotel. TIMI flow pasca prosedur IKPP dan jumlah pembuluh darah yang terlibat pada pasien IMA-EST merupakan prediktor mortalitas dan morbiditas selama perawatan. Mekanisme yang menyebabkan adanya perbedaan profil angiografi ini salah satunya dipengaruhi oleh difungsi endotel di tingkat mikrovaskular dan makrovaskular. Penelitian mengenai hubungan antara polimorfisme Gly972Arg pada gen IRS1 dengan TIMI flow pasca prosedur dan jumlah keterlibatan pembuluh darah belum pernah dilakukan.
Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara polimorfisme Gly972Arg pada IRS1 dengan TIMI flow pasca IKPP dan jumlah keterlibatan pembuluh darah pada pasien IMA-EST.
Metode: Studi potong lintang pada 104 pasien IMA-EST RSJPDHK yang menjalani IKPP yang masuk pada registri 2018. Pemeriksaan polimorfisme Gly972Arg pada IRS1 dengan menggunakan metode Taqman.
Hasil: Terdapat 104 subjek yang diikutsertakan dalam penelitian ini. Subjek dibagi dalam 3 kelompok, yakni grup wildtype/CC (42,3%), heterozigot/CT (49,0%), dan homozigot mutan/TT (8,7%). Tidak terdapat hubungan yang bermakna antara kelompok mutan (TT) dengan TIMI flow pasca IKPP (OR 0,8; p = 1,000) dan jumlah keterlibatan pembuluh darah (OR 0,3; p = 0,163).
Kesimpulan: Tidak terdapat hubungan antara polimorfisme Gly972Arg gen IRS1 dengan TIMI flow pasca IKPP dan jumlah keterlibatan pembuluh darah pasien IMA EST.
<hr>
Background: Gly972Arg polymorphism of IRS1 gene can interfere with normal endothelial function and cause endothelial dysfunction. TIMI flow after the primary percutaneous intervention procedure and the number of coronary vessels involved in STEMI patients are predictors that determine mortality and morbidity during treatment. The mechanism that causes this difference in angiographic profile is

influenced by endothelial dysfunction at the microvascular and macrovascular levels. Research on the relationship between Gly972Arg polymorphisms of IRS1 gene with TIMI flow post procedure and the amount of blood vessel involvement has not been carried out.
Objective: We sought to define whether Gly972Arg polymorphisms of IRS1 gene may affect TIMI flow after primary percutaneous intervention and number of coronary vessel involved.
Methods: Cross-sectional study design of 104 STEMI patients who underwent primary PCI at National Cardiovascular Center Harapan Kita Hospital at year 2018. Examination of Gly972Arg polymorphism on IRS1 is using the Taqman method PCR.
Results: There were 104 of STEMI patients who underwent primary PCI and recruited for the study. The subjects then divided into 3 categories, which are wildtype/CC (42,3%), carrier/CT (49,0%) and mutant/TT (8,7%). There were no significant relationship between the mutant group (TT) with TIMI flow after primary PCI (OR 0.8; p = 1,000) and the number of coronary vessel involvement (OR 0.3; p = 0.163).
Conclusion: There were no relationship between the Gly972Arg polymorphism of IRS1 gene with TIMI flow after primary PCI and the number of coronary vessel involvement of STEMI patients.