Hubungan antara pulse wave velocity aorta dengan keberadaan penyakit arteri koroner = The relationship between aortic pulse wave velocity with the presence of coronary artery disease

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Abstrak

Latar Belakang. Disfungsi endotel dan aterosklerosis merupakan kondisi yang terjadi secara sistemik. Bila ada aterosklerosis di aorta, maka kemungkinan juga terjadi aterosklerosis di arteri koroner. Kekakuan aorta akibat aterosklerosis tersebut dapat diketahui dari pulse wave velocity (PWV) aorta. Penelitian ini akan menilai hubungan antara PWV aorta dengan keberadaan penyakit arteri koroner (PAK) berdasarkan skor SYNTAX (Synergy between percutaneous coronary intervention with Taxus and cardiac surgery) angiografi koroner.

Metode. Penelitian ini merupakan suatu penelitian observasional potong lintang. Evaluasi dilakukan pada 83 pasien yang menjalani angiografi koroner elektif di Pusat Jantung Nasional harapan Kita dan memenuhi kriteria inklusi sejak September hingga November 2013. Hubungan nilai PWV aorta dengan keberadaan PAK berdasarkan skor SYNTAX dinilai dengan analisis regresi logistik.

Hasil. Setelah disesuaikan dengan usia, jenis kelamin, indeks massa tubuh, hipertensi, diabetes melitus, dislipidemia, penghambat enzim konverting angiotensin, penyekat reseptor angiotensin, penyekat kanal kalsium, diuretik, dan pasca infark miokard, tidak ditemukan hubungan antara PWV aorta dengan keberadaan PAK (Odds ratio 2,126; IK 95%: 0,744 – 6,072; p= 0,159). Pada kelompok PAK tidak ditemukan korelasi antara nilai PWV aorta dengan skor SYNTAX (r= -0,082; p= 0,539). Uji regresi logistik multinomial antara PWV aorta dengan skor pembuluh juga tidak menunjukkan hubungan yang bermakna.

Kesimpulan. PWV aorta tidak memiliki hubungan yang bermakna dengan keberadaan dan beratnya stenosis PAK, tetapi pada kelompok PAK ada kecenderungan terjadi PWV aorta lebih tinggi.

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Background. Endothelial dysfunction and atherosclerosis are conditions that occurs systemically. If atherosclerosis occurred in the aorta, it may also occurred atherosclerosis in coronary artery. Aortic stiffness as a result of atherosclerosis can be known from the pulse wave velocity (PWV) of the aorta. This study will assess the relationship between aortic PWV with the presence of coronary artery disease (CAD) by SYNTAX (Synergy between percutaneous coronary intervention with TAXUS and cardiac surgery) score from coronary angiography.

Method. This study is a cross-sectional observational study. The evaluation was done on 83 patients who undergoing elective coronary angiography at the Harapan Kita National Heart Centre and met the inclusion criteria since September to November 2013. The relationship between aortic PWV values with the presence of CAD by SYNTAX score was assessed by logistic regression analysis.

Results. After adjusting for age, sex, body mass index, hypertension, diabetes mellitus, dyslipidemia, angiotensin converting enzym inhibitor, angiotensin reseptor blocker, calcium channel blocker, diuretic, and post myocardial infarction, analyses revealed there is no associated between aortic PWV with the presence of CAD (Odds ratio 2,126; IK 95%: 0,744 – 6,072; p= 0,159). In CAD group, there was no associated between aortic PWV value with SYNTAX score. After multinomial logistic regression between aortic PWV

with vessel score, there is also no significantly associated.

Conclusion. Aortic PWV has no relation with the presence and severity of CAD, but there is a trend toward high aortic PWV in CAD group.