Relationship between baPWV and Coronary Artery Stenosis in Patient with Type 2 Diabetes

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Background/Aims: Brachial-ankle pulse wave velocity (baPWV), a simple non-invasive means of measuring arterial stiffness, reflects degree of systemic atherosclerosis.We evaluated relationship between coronary artery stenosis detected by multislice computed tomography (MSCT) angiography and baPWV in patients with type 2 diabetes.furthermore, we compared with other coroanry artery disease risk calculator value - framingham risk calculator, ASCVD (ACC/AHA) Risk Estimator, UKPDS engine **Methods:** The study group comprised 83 patients with type 2 diabetes over 30 years old. baPWV was measured with a non invasive pulse wave analyzer (VP 1,000, Colin). The percent (%) stenosis of coronary artery and coronary calcium score were measured by MSCT angiography. Presence of stenosis was defined as more than 20% stenosis of the coronary artery lumen. The coroanry artery disease risk calculators is downloaded from web. **Results:** A receiver operating characteristic curve demonstrated that the best cut-off point of a baPWV for predicting subclinical coronary narrowing was 1,650 cm/s. baPWV was positively associated with the severity of coronary artery stenosis (r $=0.214$, $p=0.040$) and calcium score (r$=0.605$, $p<0.001$). The multivariate analysis revealed that a baPWV of 1,650 cm/s or higher was a significant and independent predictor of a coronary artery disease detected by MSCT angiography (OR 3.85, 95% CI 1.54-9.58, $p=0.004$) in addition to the age $>$ 65 yrs, current smoking and calcium score >100. **Conclusions:** The present study shows that baPWVis significantly associated with severity of coronary artery stenosis detected by MSCT coronary angiography and can be used as a potential marker for predicting coronary artery disease in patients with type 2 diabetes. in addition, when we compared with the other coroanry artery disease risk calculators, the predictive value is a little lower than the other coroanry artery disease risk calculators.

Association of ADIPOR2 polymorphism with diabetic macrovascular complications in Korean type 2 DM

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Adiponectin, an adipose tissue-derived peptide, may play a pivotal role in atherosclerotic changes in vessels. This study is investigated the association of adiponectin receptor 2 ($+795$G/A) polymorphism and diabetic macrovascular complications in Korean type 2 diabetes. A total of 808 patients with Korean type 2 diabetes were enrolled in this study. Diabetic macrovascular complications were evaluated by the available medical records included images and lab findings. All subjects were genotyped for the adiponectin receptor-2 (795G/A) polymorphism using the polymerase chain reaction. The prevalence of cerebrovascular disease was no significant difference in the patient with AA genotype compared to those with AG+GG genotype (11.8% vs. 14.0%, p value 0.877). The prevalence of cardiovascular disease was no significant difference in the subject with AA genotype compared to those with AG+GG (5.5% vs. 6.9%, p value 0.246). And the prevalence of peripheral artery disease was no difference in the patient with AA genotype compared to AG+GG genotype (5.5% vs. 6.9%, p value 0.88). This study showed that adiponectin receptor-2 (795G/A) polymorphism may not related to macrovascular complications in Korean type 2 diabetes. Further investigations will be needed to define clearly which polymorphism is the true functional variants conferring risk factors for macrovascular complications of diabetes.