



## Kee-Sik Kim, M.D., Ph. D.

Professor of Medicine

The Daegu Catholic University, Medical Center

### abstract

#### *Case based approach in coronary artery disease*

Recently, arterial stiffness is regarded as an important surrogate marker for the development of cardiovascular disease and the reflection of disease status. Pulse wave velocity (PWV) of large arteries and Augmentation index (Aix) of pulse wave analysis are commonly used methods for these purposes. In several studies, these parameters are demonstrated as an independent predictor of myocardial infarction, cardiovascular death and all cause mortality. However, in real world situations, it is not easy to estimate the progression of coronary artery disease of a individual patient using these parameters, because the cut-off point in normal to abnormal range is not clearly separated like in most of the non-invasive parameters. However, serial measurement of PWV and Aix might be helpful to predict future events. A recent meta-analysis of PWV demonstrated that an increase in aortic PWV of 1 m/s or 1 SD increases the risk of MI, cardiovascular death and all cause mortality by more than 10% to 40%, respectively.

I hereby present two cases of patients with CAD different long-term outcomes.

Case 1: A 47 year old male patient, who had an old inferior myocardial infarction, diabetes, and was a current smoker, was admitted for the evaluation of chest pain. The angiographic finding showed severe stenosis in the LCX artery and diffuse insignificant stenosis in other coronary arteries. We measured PWV and Aix before CAG. A coronary stent was successfully deployed in the circumflex artery without complications. After 10 months, follow-up CAG was performed again.

Case 2 : A 65 year old male patient, who had hypertension for 2 years and was a current smoker, was admitted for coronary angiography. The CAG finding showed severe LAD stenosis with diffuse non-significant atherosclerosis in other coronary arteries. We performed PCI with a drug-eluting stent in LAD lesion without any complications. This patient was also taken PWV and Aix.