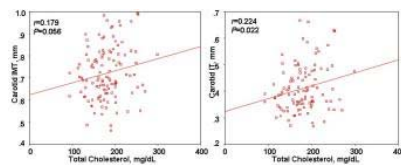


## Association between carotid intimal thickness (or intima-media thickness) and serum lipid level in patients with coronary atherosclerosis

건양의대 심장내과<sup>1</sup> 한국표준과학연구원<sup>2</sup>

\*배장호<sup>1</sup> · 김원식<sup>2</sup> · 김기영<sup>1</sup> · 현대우<sup>1</sup> · 윤현주<sup>1</sup> · 권택근<sup>1</sup> · 박정호<sup>1</sup>

**Objectives :** It is not clear whether serum lipid level is associated with carotid intima-media thickness (IMT) in patients with coronary atherosclerosis, although hypercholesterolemia is associated with increased carotid IMT. We sought to evaluate the association between serum lipid level and carotid arterial wall thickness (intimal thickness (IT), medial thickness (MT), and IMT) in patients with coronary atherosclerosis. **Methods :** Measurement of individual carotid arterial wall thickness was performed using high-resolution ultrasound and B-mode ultrasound processing in 139 consecutive patients (58±11 years old, 75 males) who had coronary atherosclerosis by coronary atherosclerosis. **Results :** Measurement of Individual arterial wall thickness was possible in 126 patients (90.6%) out of all study population. Carotid IMT was correlated with triglyceride ( $r=0.192$ ,  $P=0.042$ ) and low-density lipoprotein (LDL) cholesterol ( $r=0.208$ ,  $P=0.027$ ). Carotid IT was correlated with total cholesterol ( $r=0.224$ ,  $P=0.022$ ), triglyceride ( $r=0.270$ ,  $P=0.006$ ), and LDL-cholesterol ( $r=0.219$ ,  $P=0.025$ ), while MT did not show any significant correlation with the serum lipid level. Multivariate analysis disclosed that carotid IMT is associated with LDL cholesterol, while IT is associated with triglyceride. **Conclusions :** This study suggests that serum lipid level is more closely associated with carotid IT than IMT in patients with coronary atherosclerosis and each carotid arterial wall has a different response to serum lipid level.



## Carotid Intima-Media Thickness is Associated with the Framingham Risk Score in Patients with Coronary Artery Disease

건양의대 심장내과

\*김기홍 · 현대우 · 권택근 · 윤현주 · 김기영 · 배장호

**Introduction and Hypothesis :** Carotid Intima-Media thickness (IMT) is associated with an increased risk of cardiovascular event. Framingham risk score (FRS) is globally used to evaluate the cardiovascular risk. We sought to evaluate the relationship between carotid IMT and FRS in patients with coronary artery disease (CAD). **Methods :** Study population consisted of 270 consecutive patients (mean 59 years old, 142 males) with angiographically proven CAD. Carotid IMT was measured by high-resolution ultrasound and M'ATH software. The FRS was derived from the algorithm published in the National Cholesterol Education Program Adult Treatment Panel III guidelines (NCEP-III) using age, gender, smoking, systolic blood pressure, use of antihypertensive treatment and total and high-density lipoprotein cholesterol. **Results :** Carotid IMT was correlated with FRS ( $r=0.359$ ,  $P=0.000$ ). Mean value of FRS of the patients with carotid plaque ( $n=104$ ) was  $15.0\pm3.9$  and the patients without carotid plaque ( $n=166$ ) was  $12.0\pm4.4$  ( $P=0.000$ ). **Conclusions :** Carotid IMT and the presence of carotid plaque are associated with the FRS in patients with CAD. This study supports that carotid IMT can be used a prognostic factor in patients with CAD like FRS.

