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제	목	젊은 성인에서 심혈관질환 위험요인과 경동맥 내중막 두께의 관련성 Kangwha Study Impact of Multiple Cardiovascular Risk Factors on Carotid Artery Intima-Media Thickness in Healthy Young Adults: Kangwha Study				
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Objective: Carotid artery intima-media thickness (IMT) is a well known predictor of atherosclerotic cardiovascular in middle-aged and older adults. Although risk factors for coronary artery disease are also associated with increased carotid IMT, there is little information in younger adult populations. Thus we examined the impact of multiple risk factors on the carotid IMT in 280 young healthy adults (130 men and 150women) aged 25 years.

Methods: This study was performed as a part of the Kangwha Study, which has started in 1986 and is an on-going follow-up study of blood pressure and related cardiovascular risk factors. In 2005 follow-up examination, we measured cardiovascular risk factors including, anthropometrics, blood pressure measurement, blood chemistry, carotid ultrasonography, and questionnaire on health behaviors. Carotid arteries were evaluated using a high-resolution B-mode ultrasonography with a 7.5MHz probe. The IMT value was defined as the mean of the maximal IMT of each common carotid artery.

Results: Mean carotid IMT was relatively low (men, 0.683mm; women, 0.678mm), and evidence of plaque was not observed in any individuals. However in a multivariate model, body mass index, systolic blood pressure, current smoking were positively related with IMT. We also added fasting blood glucose level and total cholesterol/high-density lipoprotein cholesterol ratio to the risk factors. Mean IMT increased with an increasing number of risk factors defined as current smoking and values above the sex-specific 75th percentile of body mass index, fasting blood glucose, total cholesterol/high-density lipoprotein cholesterol ratio, and systolic blood pressure (p for trend <0.0001), with respective mean IMT values of 0.667, 0.672, 0.688, 0.699 and 0.768 mm for 0, 1, 2, 3, and 4 to 5 risk factors. The odds ratio for having IMT in the top quintile of the individuals with 3 or more risk factors was 4.26 (95% CI, 1.36-13.30).

Conclusion: The observed adverse trend of increasing carotid IMT with an increasing number of risk factors in free-living, asymptomatic young adults underscores the need for multiple risk factors profiling in early life.

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