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Associations between high-sensitivity C-reactive protein and ankle brachial index in asymptomatic older adults

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Background: The aims of this study were to determine (1) the prevalence of an abnormal ankle brachial index (ABI; <0.90) and (2) the association of serum high sensitive C-reactive protein (hs-CRP), a marker of systemic inflammation, with the abnormal ABI in asymptomatic older adults (>50 years old). **Methods:** Study subjects were 1,271 Koreans (263 males; mean age=65.8±8.5 year-old) in a rural area in Daegu city, Korea. They were enrolled from August to November 2008 for a cohort study. The ABI was performed after subjects rested for at least 10 minutes in a supine position. Study subjects were classified into a low (ABI <0.9) and normal ABI group. Baseline levels of serum hs-CRP were measured by immunoturbidimetric assay. **Results:** Of 1,271 asymptomatic older adults, 42 (3.3%) had a lower ABI. Based on univariate analysis for low ABI, age, gender, body mass index, systolic blood pressure, status of smoking, diabetes mellitus, and serum level of uric acid were significantly related to a lower ABI. Baseline hs-CRP levels were significantly higher in low ABI group compared to normal ABI group (2.34±2.41 mg/L versus 1.46±1.38 mg/L, p=0.023). Baseline hs-CRP levels were significantly negatively correlated with ABI (r=-0.142, p<0.001). In multivariate analysis log transformed hs-CRP (odds ratio [OR] 2.639, 95% confidence interval [CI] 1.026-6.787; p=0.044) in addition to age (OR 1.082, 95% CI 1.035-1.131; p=0.001) were independent predictors of low ABI after adjusting for gender, body mass index, systolic blood pressure, status of smoking, diabetes mellitus, and serum level of uric acid. The likelihood ratio test showed that hs-CRP added incremental value to the combination of serum uric acid concentrations and conventional risk factors in predicting low ABI. **Conclusions:** This study provides evidence that baseline levels of hs-CRP are modestly associated with low ABI. These data suggest that inflammation may have a potentially important role in part in the development of peripheral vascular disease in asymptomatic older adults.

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Serum adiponectin is a negative predictor of incident metabolic syndrome: a population-based 2.5-year follow-up study

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Objective: Growing evidence suggests that increased adiponectin levels may play a protective role in the development of metabolic syndrome (MetS). We investigated whether increased serum adiponectin is a negative predictor of incident MetS in a population-based longitudinal study in Korea. **Methods:** We analyzed data from 2,675 adults (1,250 men and 1,425 women) without MetS, aged 40 to 70 years assessed in the Korean Genome and Epidemiology Study on Atherosclerosis Risk of Rural Areas in Korean General Population (KoGES-ARIRANG). MetS was defined according to the National Cholesterol Education Program Adult Treatment Panel III report and the World Health Organization Asian Pacific Guideline. **Results:** During an average of 2.5 years of follow-up, MetS was developed in 413 men and 425 women. The median adiponectin levels at baseline in subjects who developed MetS were significantly lower than those who did not in men and women. The highest quartile of adiponectin level in men ($\geq$10.21 μg/mL) were associated with significantly decreased risk of new-onset MetS (HR, 0.30; 95% CI, 0.21-0.43) as well as all components of MetS after adjustment for age, smoking, alcohol intake, exercise and HOMA-IR. The highest quartile of adiponectin level in women ($\geq$14.40 μg/mL) were also associated with decreased risk of new-onset MetS (HR, 0.27; 95% CI, 0.19-0.38) as well as all components of MetS. **Conclusion:** Our findings suggest that increased serum adiponectin could be a negative predictor of incident MetS and its components.

	Q1	Q2	Q3	Q4
Men	120	79	68	42
Women	116	86	53	36