

RELATIONSHIP BETWEEN URINARY ALBUMIN EXCRETION AND CAROTID ATHEROSCLEROSIS IN GENERAL KOREAN POPULATION

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To reduce the risk of death or disability associated with atherosclerotic cardiovascular disease, early identification and therapeutic modification of risk factors or surrogate markers is important. Several surrogate markers for the early detection of atherosclerosis, including the measurement of endothelial dysfunction, arterial wall structure, arterial stiffness, and serologic markers of vascular inflammation, have been widely studied and shown to be associated with the presence of atherosclerotic coronary artery disease and future cardiovascular events.¹⁻⁴⁾ Albuminuria is also a well-known surrogate marker for renal and cardiovascular diseases or events in patients with diabetes, hypertension, and metabolic syndrome, as well as in general population.⁵⁻⁷⁾

In this issue of the Journal, Sung et al.⁸⁾ released valuable data on the association of microalbuminuria and carotid atherosclerosis in a healthy Korean community cohort, and the main finding was that urinary albumin excretion is significantly associated with carotid atherosclerosis as measured by carotid intima-media thickness (IMT) in a healthy Korean population. Although the association of atherosclerosis and albuminuria is clear, there is a lack of data on this issue in a Korean community cohort. Because Ogunniyi et al.⁹⁾ suggested racial/ethnic differences in microalbuminuria among adults with pre-hypertension and hypertension who were enrolled in the National Health and Nutrition Examination Survey, the results of Sung et al.⁸⁾ would be helpful in the interpretation of the significance of microalbuminuria as a surrogate for atherosclerosis in Korean population.

However, there are several important issues that should be

precautious in the interpretation of the present study. First, carotid atherosclerosis was defined as a carotid IMT ≥ 0.9 mm according to the European guideline in the study of Sung et al.,⁸⁾ and thus this definition would be different in Korean patients. The Korea IMT study group suggested a right carotid IMT of 0.646 mm and a left carotid IMT of 0.656 mm as a cut-off value in differentiating normal from abnormal. Second, the association of microalbuminuria and carotid IMT is not consistent with the previous Korean community cohort study. The recent study of Choi et al.¹⁰⁾ showed that albuminuria was significantly associated with arterial stiffness measured by pulse wave velocity and peripheral vascular disease, but not with carotid IMT or plaques in a Korean community cohort with type 2 diabetes mellitus. Therefore, a further community cohort-based research from multiple Korean sites is necessary to determine whether or not microalbuminuria can be used as a screening tool to identify adults at high risk for cardiovascular disease. Third, although the study of Sung et al.⁸⁾ showed an association between microalbuminuria and carotid atherosclerosis, an association between microalbuminuria and cardiovascular diseases or events was not evaluated. To be clinically useful, this issue should be evaluated from the present study cohort in the future.

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