

Metabolic Syndrome as a Risk Factor of Coronary Artery Disease

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In the past few decades, metabolic syndrome has emerged as a predictor of cardiovascular disease beyond conventional risk factors. Many researches have been performed to elucidate influence of the syndrome on the cardiovascular disease and the plausible mechanism.

Cardiovascular risk associated with metabolic syndrome has been reported 1.4 to >3. Although, its risk after adjustment of traditional factors was significant in some studies, whether the risk has additive value to the sum of each risk component is not clear. In Korea, the unadjusted and adjusted hazard ratios by metabolic syndrome are 1.3-4.0 and 1.4-1.7, respectively.

Several pathways are suggested for the pathophysiology of vascular complications of metabolic syndrome. One is insulin resistance and another is adipose tissue-derived free fatty acids and inflammatory cytokines. Free fatty acids induce production of glucose, VLDL, and prothrombotic proteins that may affect atherogenesis directly or indirectly.

Metabolic syndrome is more strongly associated with cardiovascular risk in women than in men in a few reports. However, further studies are needed to answer this issue more clearly.