



Special Issue

Atherosclerosis, Diabetes Mellitus, and Metabolic Syndrome: Commonalities and Differences in Phenotypes, Metabolic Pathways and Genetics

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Special Issue Introduction

Atherosclerosis and metabolic disturbances like excessive body mass, obesity, metabolic syndrome and Type 2 diabetes mellitus are widely spread and represent the pathologies affecting most of the aged population; they often develop in parallel and, thus, form the comorbidity. Clustering of obesity, conventional cardiovascular risk factors, atherosclerosis, coronary artery disease, type 2 diabetes mellitus is observed both in epidemiological and clinical studies. Each of common risk factors individually explains an increased risk of clinical manifestations of disease, and the presence of multiple risk factors is translated into the higher integral risk level. This is well supported by the concept of constellation of several risk factors that confers an elevated integral risk of cardiometabolic abnormalities and atherosclerotic disease. Most of conventional risk factors are shared by atherosclerosis and metabolic diseases, but the genetic and metabolic mechanisms may differ, thus subdividing into common and disease-specific ones. It is well recognized that common risk factors are characterized by a significant genetic component, but there are evident uncertainties on the role of genetic factors in risk factor clustering in individuals. The complexity of phenotypes should be also taken into account, as well as uncertainty about the common pathogenetic mechanisms explaining the clustering of cardiometabolic abnormalities and disease development, as well as modulating effects of lifestyle factors.

The present special issue aims to provide contributions related to the recent fundamental, generalized and clinical findings that would integrate research data, aimed to evaluation of atherosclerosis-related and metabolic pathologies, and even for finding molecular and pathway targets for further development of pathogenesis-targeted therapy.

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