**METABOLIC SYNDROME AND DYSLIPIDEMIA AS RISK FACTORS FOR ATRIAL FIBRILLATION**

**H. Watanabe**

Div. of Cardiology, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan

Atrial fibrillation is the most common sustained arrhythmia observed in clinical practice, with a lifetime risk of 1 in 6 for people 40 years or older, even in the absence of antecedent congestive heart failure or myocardial infarction. Atrial fibrillation is associated with increased risks of ischemic stroke, heart failure, all-cause mortality, and lower quality of life. Due to its high prevalence and serious complications, atrial fibrillation is a significant public health problem. Therefore, the prevention of atrial fibrillation and the complications is important. Multiple risk factors have been identified for the development of atrial fibrillation, and atherosclerotic risk factors, including age, male gender, hypertension, obesity, and type II diabetes, have also been implicated as prominent risk factors for atrial fibrillation. Furthermore, in our community-based observational cohort study in Japan, we have identified that metabolic syndrome and blood lipid levels are associated with the increased risk of developing atrial fibrillation. Among the metabolic syndrome components, obesity, elevated blood pressure, low high-density lipoprotein cholesterol, and impaired fasting glucose, but not elevated triglycerides showed the increased risk for atrial fibrillation. Among lipid profiles, low high-density lipoprotein cholesterol was associated with the increased risk of atrial fibrillation in women but not in men. Interestingly, the incidence of atrial fibrillation was decreased with increasing quartiles of total cholesterol and low-density lipoprotein cholesterol, suggesting the existence of cholesterol paradox in atrial fibrillation although the mechanism is unclear. In conclusion, our data indicate that the metabolic derangements are important in the pathogenesis of atrial fibrillation.

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