Our 10 years experience; Clinical and epidemiological characteristics of juvenile myocardial infarction.

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Background
Elevated incidence of acute myocardial infarction (AMI) in young age and its correlation with growing population of obesity and hypertension in the age due to change of lifestyle have recently been reported. However, precise picture of the correlation is undetermined. In addition, involvement of Kawasaki disease, another increasing risk factor, in AMI is unknown.

Objectives
Backgrounds of early-onset AMI including history of Kawasaki disease and coronary risk factors were investigated.

Methods
Among 1687 patients with AMI who admitted in St. Marianna University School of Medicine hospital from January 2000 to December 2010, 22 patients under 40 year-old (1.3%) were inspected for obesity, hypertension, hyperlipidemia, smoking, diabetes and family history as well as a history of Kawasaki disease.

Results
Twenty cases (91%) of the early-onset AMI patients were male. Average number of coronary risk factors per patient was 3.09±1.4, with following incidence: obesity (BMI>25: 71%, BMI>30: 38%), hypertension (55%), hyperlipidemia (73%) and diabetes (23%), smoking (55%), and family history of AMI (38%). Percutaneous coronary interventions were performed to 22% of patients with double stenoses. As underlying diseases, collagen disease (2 patients), venous sinus thrombosis (1 patient), familiar hyperlipidemia (1 patient), primary aldosteronism (1 patient), dilated cardiomyopathy (1 patient) and suspicion of Kawasaki disease (2 patients) were identified.

Conclusions
The early-onset AMI in Japan is characterized as a male disease preceded by multiple untreated coronary risk factors. Kawasaki disease has less implication than expected. Our results strongly suggest that the risk factors need to be treated at an early stage.