Antithrombotic therapy in Kawasaki disease patients with giant coronary aneurysm

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Objective
The antithrombotic therapy in Kawasaki disease patients with giant coronary aneurysm (GA) has not been established. The aim of this retrospective study was to determine the outcome of patients with GA treated with antiplatelet therapy and anticoagulant therapy.

Method
Subjects of this study were 16 patients with GA from 1999 to 2013 in Chiba university hospital and Tokyo Women’s Medical University Yachiyo medical center. We compared patients in whom cardiovascular events such as myocardial infarction (MI), angina (AP), and silent myocardial ischemia (SMI) occurred (E group, n=7), and patients in whom such events did not occur (non-E group, n=9). We started the antiplatelet therapy and anticoagulant therapy, using intravenous heparin administration, when the coronary aneurysm grew up to 4mm. When patients got afebrile, C-reactive protein got negative and extension of GA was settled, we changed heparin into oral warfarin (Wa) administration. We took caseation oral Wa and using only antiplatelet therapy into consideration, when cardiovascular events did not occur in 2-3 years after the onset of GA.

Result
The mean observation period was 8.6 years (0.75 to 13.8). Target PT-INR was 2.0-2.5 or target TT was 15-30%. There was no difference in the day of starting initial treatment, onset of coronary aneurysms development, duration of fever, and observation periods between these groups. Total events in E group was 8. Five patients of these had MI and one patient with MI died. No patient had AP. Three patients had SMI. Three events occurred during heparin administration in acute phase; three events occurred during antiplatelet therapy with Wa administration, two events occurred during antiplatelet therapy without Wa administration. All five patients with GA in single-vessel disease had no cardiovascular event. Four of eight patients with GA in double-vessel disease had cardiovascular events. On the other hand, all three patients with GA in triple-vessel disease had cardiovascular events.

Conclusion
The prognosis of patients in this study is unsatisfactory, especially in patients with GAs in triple-vessel disease. It might be necessary to undergo antithrombotic therapy longer for patients with GAs in triple-vessel disease.