AORTIC ELASTIC PROPERTIES ARE ALTERED IN PATIENTS AFTER KAWASAKI DISEASE ESPECIALLY WITH CORONARY ARTERY ANEURYSM

ACC Poster Contributions
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Background: Kawasaki disease (KD) is an acute inflammatory syndrome that results in systemic vasculitis in children. Recent studies suggest that abnormal vascular wall morphology and vascular dysfunction persists in patients after KD. However, the difference in vascular elasticity in between patients after KD with and without coronary artery aneurysms is still controversial. Thus, we aimed to evaluate aortic elastic properties in children with and without coronary artery aneurysm after KD.

Methods: Sixty-three patients after KD were studied, comprising 15 patients with persistent coronary artery aneurysms (Group 1) and 51 patients who had transient coronary artery dilation in acute stage and had no coronary artery lesions at the time of study (Group 2). Forty-six healthy subjects were also studied as controls (Group 3). We obtained end-systolic and end-diastolic aortic dimensions by echocardiography. Noninvasive brachial artery pressure was also measured. Using these parameters, aortic stiffness index (ASI) and aortic distensibility (AD; cm²/dyne*10^-4) were calculated.

Results: There were no significant differences in age and body surface area among the 3 groups. Pulse pressure was significantly greater in the Groups 1 and 2 than in the Group 3. ASI was significantly higher in the Group 1 than in the Groups 2 and 3. AD was significantly lower in the Group 1 than in the Groups 2 and 3. Of note, Group 2 had significantly lower AD than the Group 3.

Conclusions: Impaired aortic elastic properties were demonstrated in KD patients especially with coronary artery aneurysms. Our findings suggest that careful follow-up of aortic function is warranted in KD patients with coronary artery aneurysms.