CONCLUSIONS: These results suggest that linear shadows inside CALs on 2DE would reflect the existence of a thickened intima. We expected that following up the changes of linear shadows inside CALs on 2DE, the diameter between linear shadows was almost consistent with the diameter of CALs on CAG.

RESULTS: Linear shadows were detected in 11 CALs on high-resolution 2DE in 9 patients with Kawasaki disease. The outer diameters of CALs on 2DE (7.0 ± 2.1 mm) were larger than those on CAG (4.4 ± 1.6 mm), whereas the inner diameters between linear shadows (3.9 ± 1.6 mm) were almost equal to the diameters of CALs on CAG. There was a statistically significant positive correlation ($y = 0.99x - 0.10; r^2 = 0.77$) between the diameters of CALs on CAG and the inner diameters between linear shadows on 2DE. A thickened intima was revealed in the same regions that showed linear shadows on 2DE, in 7 of 11 lesions on MRI, and in all 4 lesions on which intravascular ultrasound was performed. In 3 patients who had been followed up over 3 years, linear shadows inside CALs on 2DE persisted, and the diameter between linear shadows was almost consistent with the diameter of CALs on CAG.

EXPOSURE TO TOBACCO SMOKE DECREASES ELASTICITY OF THE AORTA IN CHILDREN

Submitted by Katariina Kallio
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INTRODUCTION: Attenuated arterial elasticity is one of the earliest markers of atherosclerosis.

OBJECTIVE: Our aim was to investigate the relationship of passive smoking and elastic properties of the aorta.

METHODS: We studied 11-year-old healthy children ($n = 386$) from the randomized, prospective atherosclerosis prevention trial (STRIP). Aortic elasticity was analyzed by using M-mode ultrasound imaging on the basis of the measurement of blood pressure and arterial diameter changes during diastole and systole. Aortic compliance (AC) and aortic stiffness index (SI) were calculated. Exposure to tobacco smoke was measured by using serum cotinine concentration, which was analyzed with gas chromatography.

RESULTS: Cotinine concentrations ranged from nondetectable (detection limit: 0.16 ng/mL) to 6.8 ng/mL. Cotinine values and aortic elasticity measures were similar between genders. Children were classified into 3 groups according to their cotinine concentration: the top-decile cotinine group ($n = 39$), the nondetectable cotinine group ($n = 220$), and the low cotinine group ($n = 127$). Conventional atherosclerosis risk factors were similar between the 3 cotinine groups. A decreasing trend in AC ($P = .041$) and an increasing trend in SI ($P = .006$) was observed across the cotinine groups with an
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