

Coronary Changes and Cardiac Events in Children Diagnosed with Kawasaki Disease without Initial Coronary Aneurysm

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Background: Kawasaki disease (KD) is a systemic vasculitis which may lead to coronary artery aneurysm (CAA). The optimal timing of serial echocardiography in uncomplicated KD is debated.

Objectives: To assess changes in coronary artery Z-scores from the initial diagnosis, two weeks, eight weeks, and one year following diagnosis and adverse cardiac events in children diagnosed with KD without initial CAA.

Methods: Retrospective chart reviews of four centers were conducted of children who were diagnosed with KD without initial CAA (coronary artery Z-score < 2.5) between 2017 and 2020. Eligibility criteria included the absence of congenital heart disease and patients with available baseline and eight-week echocardiography. The two-week and one-year echocardiography with adverse cardiac events were also explored.

Results: 110 patients with median age of 23 months were included in the study. Initial coronary ectasia (Z-score 2 – 2.49) was reported in 26 patients (23.6%). The 64 two-week echocardiographic studies detected 4 new small CAAs and 5 coronary ectasias. No antithrombotic treatment was given. The eight-week examinations (n=110) showed resolution of all CAAs. Only one patient had persistent ectasia that regressed to normal within one year. No cardiac events were reported.

Conclusion: New CAA in-patients with KD without CAA in their initial echocardiography are rare. Patients who had normal echocardiographic follow-up at 2-8 weeks continue to be normal at one

year. The optimal timing of the echocardiographic follow-up should be at 2-8 weeks in patients without initial CAA, who still have a coronary artery Z-score < 2 at the second echocardiography.



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