Kawasaki Disease (KD)

36

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Abstract

Kawasaki disease (KD) is an acute, self-limited vasculitis of childhood. It can result in coronary artery aneurysms in 25% of patients, especially if the diagnosis is missed. Echocardiography is the imaging modality of choice for diagnosis of coronary artery involvement and evaluation of myocardial function. Serial echocardiography is necessary in order to detect thromboses in aneurysms especially in patients with giant aneurysm.

Kawasaki Disease (KD)

1. Evaluate left main coronary artery (LMCA), left anterior descending (LAD), and Left circumflex (LCX) in multiple imaging planes. Start with parasternal short axis view to see the origin of both LMCA and RCA. Then with slight rotating and tilting of transducer follow the LAD and LCX length from bifurcation. Assess the distal LAD in parasternal long axis and subcostal coronal views and follow the LCX length in atrioventricular groove in apical four chamber view.
2. Follow RCA course in parasternal long axis and also in apical and subcostal sagittal and coronal views.
3. Evaluate the internal dimension of coronary arteries from the inner edge to inner edge of the vessel wall and do not measure at the level of its normal branching. Evaluate Z scores of LAD, RCA, and LMCA. Remember that most frequently coronary artery aneurysms develop in the LMCA and proximal segments of the LAD and the RCA (Fig. 36.1a, b).
4. Assess any ectasia, the internal diameter of coronary arteries should be less than 3 mm in children younger than 5 years old and less than 4 mm thereafter, otherwise it is considered coronary ectasia
5. Appreciate perivascular brightness, lack of normal tapering, segmental dilation, or narrowing of coronary arteries. If the internal diameter of a segment is 1.5 times that of the adjacent segment it is abnormal
6. Appreciate any mitral, tricuspid and aortic valve regurgitation
7. Pay attention to any LV or RV systolic and diastolic dysfunction and regional wall motion abnormality.
8. Evaluate even minimal pericardial effusion.
9. Number, size (small <5 mm, medium 5–8 mm, or giant >8 mm in internal diameter), location, and shape (fusiform or saccular) of every aneurysm should be described.

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M. Moradian, A. Alizadehasl (eds.), *Atlas of Echocardiography in Pediatrics and Congenital Heart Diseases*,
https://doi.org/10.1007/978-3-662-62341-1_36

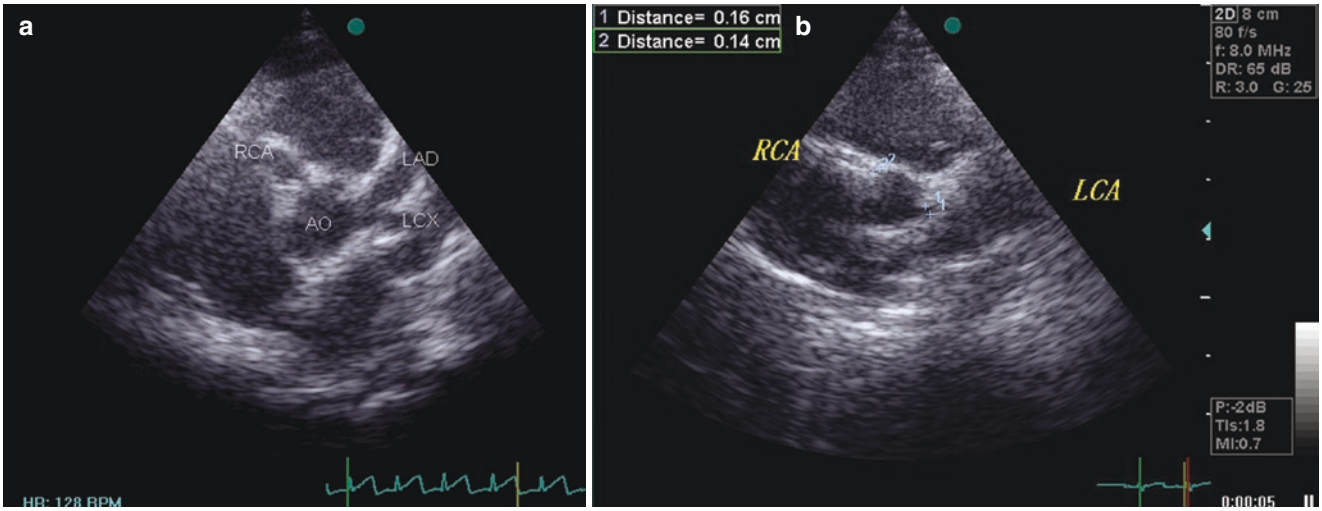

Fig. 36.1 (**a**) In this TTE the parasternal short axis window is used to show LCX ectasia and fusiform aneurysm formation in RCA, and LAD in a young infant suffering from Kawasaki disease. (**b**) The same view in a normal infant. *RCA* right coronary artery, *LCA* left coronary artery, *LAD* left anterior descending, *LCX* Left circumflex, *AO* aorta

Suggested Reading

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