

Shenoy B, Singh S, Ahmed MZ, Pal P, Balan S, Vishwanathan V, Battad S, Rao AP, Chaudhuri M, Shastri DD, Soans ST. Indian Academy of Pediatrics Position Paper on Kawasaki Disease. Indian Pediatr.

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Key Points

• Echocardiographic Changes in KD

- Early changes (1st week of fever): Coronary changes are uncommon in the first week. The important clues are
 - myocarditis (prevalence 50-70%),
 - pericarditis, small pericardial effusion and
 - transient mild to moderate mitral regurgitation (23-27%).
- 7% of children with KD may present with cardiovascular collapse (KD shock syndrome).
- Subacute changes (after 1st week of fever): The highlight of this phase is detection of coronary involvement and its aftermath.
 - The coronary involvement as per z score classification is as follows:
 - No involvement: z score always < 2
 - Dilatation only 2-2.5
 - Aneurysms as per size:
 - Small CAA: ≥ 2.5 to < 5
 - Moderate CAA: ≥ 5 to < 10 and absolute dimension < 8 mm
 - Large CAA: >10 or absolute dimension > 8mm

Limitations of Echocardiography for Coronary Artery Assessment:

- Abnormal coronaries are seen in only 20- 25% of KD.
- Coronary artery aneurysms usually appear after 1st week. It must be repeated in all KD patients after 2 & 6 weeks
- Cardiac sequelae in classical and incomplete KD are same. So, one has to be more meticulous while imaging suspected atypical KD because diagnosis rests on 2 D echo and laboratory findings.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



Echocardiographic Findings in Kawasaki Disease: What we should know?

Timing of Echocardiography:

- At diagnosis.
- Uncomplicated patients: 1-2 weeks and also 4-6 weeks after treatment.
- For significant and evolving coronary abnormalities: At least twice per week till luminal dimensions stabilize and we should look specifically for thrombus. After that at 2 weeks, 4-6 weeks, 3 months and then every 6 -12 months till parameters normalize.
- To detect coronary artery thrombosis it may be reasonable to perform echocardiography for patients with thrombus at diagnosis, expanding large or giant aneurysms twice per week while dimensions are expanding rapidly and at least once weekly in the first 45 days of illness, and then monthly until the third month after illness onset.

Key Message: Echocardiography is an important modality to diagnose & treat children with suspected Kawasaki Disease. Normal Coronaries in first week do not exclude KD.

EXPERT COMMENT



“A detailed echocardiographic study is mandatory as soon as diagnosis is suspected and then repeated as per findings in initial study. It should provide a quantitative assessment of luminal dimensions normalized as z scores adjusted for body surface area. Echocardiographic parameters play an important role in reaching the diagnosis of Kawasaki Disease & these new guidelines give a clear approach for same.”

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Reference

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