

Coronary artery assessment in Kawasaki Disease with low-dose CT angiography to uncover vascular pathology

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BACKGROUND

Kawasaki Disease (KD) is a vasculitis with formation of coronary artery aneurysms (CAAs) that can lead to myocardial ischemia. To initiate treatment and prevent myocardial infarction, coronary artery assessment is essential. Echocardiography is the primary imaging modality used in KD despite limited visualization of the distal segments and coronary artery wall pathology such as calcification, plaque and stenosis. Coronary angiography (CAG) is the gold standard, but not used as primary imaging modality due to invasiveness and radiation exposure. Similarly, coronary computed tomographic angiography (cCTA) has not been implemented because of high radiation dose. However, state-of-the-art CT-scanners now enable low dose cCTA imaging. The aim of this study is to report **(I)** the diagnostic yield of cCTA compared to echocardiography, and **(II)** the radiation dose.

RESULTS

(I)

Coronary artery	CAA by cCTA (No. of patients)	CAA by echocardiography (No. of patients)
LMCA	11 (11)	1 (1)
RCA	32 (22)	18 (17)
LAD	18 (14)	8 (7)



cCTA identified 61 CAAs, of which 34 (56%, with a Z score >3, in 22 patients) were not detected by echocardiography.

6 Cx aneurysms were additionally found on cCTA

Calcifications as early as 2.7 yrs after onset of disease were found on cCTA

(II)



Radiation exposure in Low-dose CT was 1/3 of standard CT

CONCLUSION

Low-dose cCTA is a feasible and sensitive modality for imaging in addition to echocardiography during follow-up

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