Optical Frequency Domain Imaging and Intravascular Ultrasound for Adult-Onset Kawasaki Disease in the Sub-Acute Phase

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We previously reported on an 18-year-old patient with adult-onset Kawasaki disease (KD).¹ Given that the coronary computed tomography angiography showed a coronary artery aneurysm (CAA) along the left anterior descending artery (LAD) and the patient complained of chest pain, we performed coronary angiography 5 months after onset. Angiography showed the CAA along the LAD and the irregular vessel wall of the right coronary artery (RCA; **Figure A,B**). Notably, optical frequency domain imaging (OFDI; FastView, Terumo) and intravascular ultrasound (IVUS; ViewIt, Terumo) showed intimal thickening without calcification in the CAA along the LAD (**Figure C,D, Movie S1**). In addition, OFDI and IVUS indicated diffuse intimal thickening along with the aneurysmal changes in the RCA (**Figure E,F**). The fractional reserve flow in the LAD was 0.89. OFDI and IVUS of KD usually show severe calcification in the later phase.² In the present case, however, CAA with intimal thickening without calcification was seen because coronary angiography was performed in the subacute phase. This is extremely rare because most patients with KD are children, and we cannot perform intravascular imaging for children in that phase.

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Figure. (A,B) Coronary angiography showing (A) a coronary artery aneurysm (CAA) in the proximal left anterior descending artery (LAD; arrow) and ectatic changes in coronary arteries, on right anterior oblique-caudal view; and (B) the irregular vessel wall of the right coronary artery (RCA; arrow), on left anterior oblique-cranial view. (C) Optical frequency domain imaging (OFDI) and (D) intravascular ultrasound (IVUS) showing a CAA with intimal thickening in the proximal LAD; (C) white arrow: media-media, 7.7 mm; red arrow: intima-media thickness, 0.9 mm; 1 division of scale, 0.5 mm; (D) red arrow, intima-media thickness; 1 division of scale, 1.0 mm. (E) OFDI and (F) IVUS showing diffuse intimal thickening of the RCA; (E) white arrow: media-media, 5.4 mm; red arrow: intima-media thickness, 1.1 mm; 1 division of scale, 0.5 mm; (F) red arrow, intima-media thickness; 1 division of scale, 1.0 mm.

Disclosures

The authors declare no conflicts of interest.

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Supplementary Files

Supplementary File 1

Movie S1. Optical frequency domain imaging showing a coronary artery aneurysm with intimal thickening in the proximal left anterior descending artery.

Please find supplementary file(s);
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