Efficacy of optical coherence tomography in patients suspected Kawasaki disease with severely calcified plaque

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A 64 year-old male was admitted due to stable angina. His past history is unremarkable. Coronary angiography (CAG) showed aneurysmal formations in the proximal right coronary artery and a severe stenosis in the mid RCA and proximal left anterior descending artery (LAD) with severe calcification. We started the procedure transfemoral approach with 7Fr guiding catheter. After unsuccessful crossing the lesion of intravascular ultrasound (IVUS) catheters, rotational Atherectomy (RA) with a 1.5 and 2.0 mm burr was performed. After RA with 2.0 mm burr, optical coherence tomography(OCT) and IVUS were performed. IVUS demonstrated a severely calcified segment, but not calcium area and thickness. Conversely, OCT detected in detail the severity and distribution of concentric calcified plague. Maximum thickness of calcified plague is 1.06mm and minimum thickness of that is 0.77mm. At that time we finished the procedure after only balloon long inflation. Three months later, CAG showed a restenosis in the mid RCA. At the second attempt, We started the procedure transfemoral approach with 8Fr guiding catheter. OCT revealed severe calcified and concentric lesion. RA with a 2.15 and 2.25 mm burr was performed. The target lesion was dilated using 3.25mm balloon. Next, we succeeded in everolimus eluting stent 3.5/38mm. we were able to confirm a sufficient expansion of stent in IVUS. OCT guided PCI may improve clinical outcomes in the patients with severe calcified plaque