Recurrent Spontaneous Coronary Artery Dissection Observed With Multiple Imaging Modalities

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Case: 51 years old male
Past history:
Hypertension, Dyslipidemia,
Chronic atrial fibrillation
Family history: Nothing special
Smoking: Current smoker

cocaine or amphetamine medication(-), chest trauma(-)
connective tissue disease (-)
Present illness

He was referred to our hospital for the evaluation of chest pain. CAG, IVUS and MDCT revealed SCAD in the distal segment of RCA. Left coronary system was intact. Seven months later, he re-experienced severe chest pain.
Angiography showed moderate stenosis in the distal segment of RCA. IVUS revealed true lumen and false lumen in the distal segment of RCA.
MDCT of RCA (the first event)

MDCT revealed coronary dissection in the distal segment of RCA.
Chest X-ray and ECG (the second event)
MDCT of LCX ① (the second event)

MDCT revealed low density plaque or hematoma at the left main coronary artery and the proximal to middle segment in the LCX.
MDCT of LAD ② (the second event)

MDCT revealed low density plaque or hematoma at the left anterior descending artery (LAD).
Angiography of left coronary artery did not show severe stenosis.
IVUS of LCA (the second event)

As coronary flow was maintained well, we selected medical therapy.

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MDCT revealed occlusion of distal LCX and disappearance of hematoma of LMT and LCX.
MDCT of LAD (the third event)

MDCT showed disappearance of hematoma of LMT and proximal LAD.

→ As culprit is distal, we selected medical therapy.

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We speculated that the atherosclerosis caused SCAD, because he had multiple atherosclerotic risk factors such as hypertension, hyperlipidemia, diabetes militus, smoking and obesity.

The case had the opportunity of SCAD three times. The recurrence rate of SCAD is reported to be 17%.

The case demonstrated that SCAD may spontaneously heal at follow up.
Our case suggests the possibility that the prevalence of SCAD is still underestimated, since MDCT or IVUS is not routinely performed for ACS patients with normal CAG.

IVUS and MDCT should be considered for the diagnosis of acute coronary syndrome without angiographic evidence of coronary stenosis or dissection.
Conclusion

• The case had the opportunity of SCAD three times.

• SCAD of LCA may heal spontaneously at MDCT.

• IVUS and MDCT should be considered if without angiographic evidence of coronary stenosis or dissection.