

C050

A young female with ventricular fibrillation

A 36-year-old female was well before. She complained of chest pain and dyspnea at her father's funeral and was brought to the local clinic, where she had ventricular fibrillation and cardiopulmonary resuscitation (CPR) was administered. She had return of spontaneous circulation after CPR and defibrillation. She was transferred to our hospital.

At our hospital, the ECG showed anterior Q wave and the screen echocardiography revealed left ventricular large apical wall hypokinesis. Under the impression of acute coronary syndrome or Takotsubo cardiomyopathy, she underwent coronary angiography.

The coronary angiography showed the coronary artery had no significant stenosis but left main (LM) dissection was suspected. The aortogram revealed no aortic dissection. Intravascular ultrasound showed LM dissection which extended to left anterior descending artery (LAD) and left circumflex artery (LCX) with intramural hematoma (IMH). For suspected coronary dissection related ventricular arrhythmia, percutaneous coronary intervention (PCI) was arranged.

[Target lesion]

LM, LAD and LCX

[Strategy]

Due to young age and no significant atherosclerosis, cutting balloon without stenting was our initial choice.

1. We used a cutting balloon (3.0/10mm) to dilate LCX first; however, the LAD blood flow was affected, which was related to dissection propagation. Therefore, we used the cutting balloon (3.0/10mm) to dilate LAD; not only the LAD flow did not become better but the diagonal blood flow became TIMI 0. Another cutting balloon (2.0/10mm) dilated the diagonal branch but still no effect. We changed the strategy to stenting for the vessels.

2. A drug-eluting stent (DES) (3.5/26mm) was deployed at LCX first and the LCX flow became better. Another DES (3.5/30mm) was deployed at LM-LAD and then a DES (2.75/22mm) was deployed at LAD sequentially. We ever repeated cutting balloon dilatation but the effect was limited. Another DES (2.25/26mm) was deployed at the diagonal branch.

[Final results]

The final angiogram showed LM, LCX, LAD and diagonal branch blood flow was TIMI 3. The patient's hospitalization course was relatively stable after PCI for the coronary dissection and the patient was discharged several days later.