

1041 Successful Percutaneous Coronary Intervention (PCI) and Complication in a Spontaneous Coronary Artery Dissection (SCAD) with STEMI Treated with Cutting Balloon Angioplasty.

<Back ground>

Revascularization in patients with spontaneous coronary artery dissection (SCAD) remains controversial and technically challenging. But there have been recent successful case reports of using cutting balloons. Some experts suggest 'pulling' dilated cutting balloon as more effective technique to fenestrate the intramural hematoma (IMH).

<Case presentation>

A 48-year-old female without any risk factors was admitted to our hospital with chest pain persisting for one day. ECG revealed ST elevation and T wave inversion in V2-6 leads. Emergency coronary angiography showed total occlusion of the mid left anterior descending coronary artery (LAD). Intravascular ultrasound (IVUS) confirmed dissection and intramural hematoma (IMH) in the lesion. After a drug-eluting (Resolute onyx 2.5×22mm) stent insertion, IMH was propagated to stent distal and true lumen was compressed by IMH. So we performed a cutting balloon angioplasty to create communications between the true and false lumens, expecting to reduce the compression, and restore the distal coronary flow. Cutting balloon (Wolverine 2.25mm×10mm) was dilated to 4atm in the lesion and carefully pulled. Coronary flow was immediately restored to TIMI grade 3. IVUS showed improvement of IMH. However, 90 minutes after the procedure, she complained chest discomfort and became hypotensive. Bedside echocardiography revealed cardiac tamponade. Immediate pericardiocentesis was performed and coronary angiography showed coronary perforation. Hemostasis was obtained with a Coil (C-stopper 30mm). Review of the previous angiography suggested that a guidewire might have penetrated to the pericardial space when dilated cutting balloon was pulled. Pulling the dilated cutting balloon may be the last resort to re-establish coronary flow in the case of SCAD where regular angioplasty failed. Extra caution is needed to avoid potentially fatal complication when the procedure is performed.