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A case of spontaneous coronary artery dissection treated with percutaneous coronary intervention using IVUS-guided rewiring technique.

We describe a 49-year-old woman without significant cardiovascular risk factors who was transferred to our hospital with sudden onset of chest pain. Coronary angiography was performed, which showed a dissection extending from the left main trunk (LMT) involving the left anterior descending artery (LAD). Because coronary flow was impaired by contrast injection and the patient complained of chest pain with ST-elevation, we performed urgent percutaneous coronary intervention (PCI) for LMT to LAD. The first wire (SION blue) was initially introduced into the distal LAD, but intravascular ultrasound (IVUS) imaging revealed that the guide wire was passed through the false lumen at the ostium of the left circumflex artery (LCX). Then, we inserted the second wire into the LCX, and IVUS imaging confirmed that it was placed in the true lumen of the LCX. Next, we inserted the third wire from the true lumen of the LCX to the true lumen of the LAD using a double lumen catheter by referring to the IVUS findings. The IVUS-guided rewiring technique was successful and the IVUS imaging revealed that the third wire was passed through the true lumen. A drug-eluting stent was deployed, and final coronary angiogram showed an acceptable result. This case report highlights that physicians should consider SCAD among the differential diagnoses in patients presenting with acute coronary syndrome, particularly in young women. The IVUS plays a pivotal role during PCI for patients with SCAD.