

1012 Total occlusion of saphenous vein graft treated with 1.4 mm, 2.0 mm excimer laser catheters and distal protection

70 year-old-man who had a history of hypertension and dyslipidemia was underwent coronary artery bypass graft (left internal thoracic artery - left anterior descending, saphenous vein graft (SVG)-right coronary artery (RCA), SVG-left circumflex (LCX)) in 1999. In 2013 and 2014, we performed percutaneous coronary intervention (PCI) for SVG-RCA. However, he complained dyspnea on effort and the result of treadmill test was positive on lateral wall leads in 2019. Coronary angiography (CAG) showed SVG-LCX occluded. The result of coronary computed tomography angiography 2 months before CAG was severe stenosis of SVG-LCX graft, so we considered the occlusion period was not so long. We performed PCI for this lesion with 8-Fr AL-1.0 SH guiding catheter and 7-Fr guide extension. After crossing of intermediate penetration force guide wire, intravascular ultrasound (IVUS) showed attenuation plaque and huge amount of thrombus in this lesion. At first, we performed 1.4 mm excimer laser coronary angioplasty (ELCA). Because the risk of distal embolism was considered very high and the vessel diameter was large, we added 2.0 mm ELCA. IVUS revealed the reduction of thrombus and enlargement vessel lumen. CAG began to recognize forward flow. Next, we performed distal protection and dilated with 3.5 mm semi-compliant balloon. When thrombus aspiration was performed after ballooning, a large amount of red blood clot were found. We deployed two drug eluting stents for SVG and performed drug coated balloon angioplasty for native LCX. The final angiogram showed no distal embolism and good flow. According to The ULTRAMAN registry, the frequency of 2.0 mm was approximately 4% of entire ELCA and the combination of 1.4 mm and 2.0 mm concentric catheters was rarely used. Furthermore, treatment of SVG lesions were 1.8%. We report the case treated with combination 1.4 mm, 2.0 mm ELCA, distal protection and thrombus aspiration for SVG lesion with high risk of distal embolism.