

1033 Bailout Polytetrafluoroethylene-Covered Stent (PTFE-CS) Implantation for Severe Coronary Perforation at the Bifurcation of the Left Anterior Descending Coronary Artery (LAD) Using the Kissing Stent Technique.

A 64-year-old male with hypertension, dyslipidemia underwent percutaneous coronary intervention (PCI) for ST-segment elevation myocardial infarction (STEMI) to the proximal right coronary artery (RCA) lesion with a drug eluting stent (DES) 9 months ago. In follow-up period, coronary angiography (CAG) revealed significant stenosis with coronary calcification in the ostial LAD and in the bifurcation of the mid LAD. Fractional flow reserve (FFR) was 0.73. Because of the severe calcification, we planned to treat the ostial LAD by performing rotational atherectomy (PTRA) followed by balloon angioplasty and stenting. An 8F JCL4.0 guiding catheter was inserted via right femoral artery. A Sion guidewire was crossed to LAD and the wire was exchanged with a RotaWire Extra Support wire. PTRA was then performed using a 2.0 mm burr and 2.25mm at 160,000 rpm from the LMCA to the ostial LAD. A Rinato guidewire was crossed to diagonal branch. We performed predilatation with a Lacross NSE 2.75mm×13mm to 2nd diagonal branch and a Lacross NSE 3.0×13mm to LAD using Kissing balloon technique (KBT) in the mid LAD bifurcation. After KBT, angiogram revealed Ellis type III coronary perforation. It was difficult to find the location immediately and then we searched for the perforation site by inflation around bifurcation of the mid LAD with a Ryusei perfusion balloon 3.0×19 mm. Ballooning to the just proximal bifurcation of the mid LAD was able to seal the extravasation for 20 minutes. After ballooning, the angiogram showed no contrast extravasation. However, Intravascular ultrasound (IVUS) images showed vertical dissection and pseudoaneurysm. Another 7 French extra backup 3.75 guide catheter was engaged through a left femoral approach in order to deliver two devices concurrently by using double-guiding technique. A Graftmaster PTFE-CS 3.5×16 mm was implanted in the proximal bifurcation of the LAD. A Graftmaster PTFE-CS 2.8 ×16 mm was implanted in LAD using the kissing stent technique, with another Graftmaster PTFE-CS 2.8 × 16 mm in the 2nd diagonal branch using the child-in-mother technique. Postdilatation was performed by a 2.75 mm and 3.0mm NC balloon using KBT. Finally, the angiogram showed no further evidence of contrast extravasation and confirmed that the LAD and 2nd diagonal branch circulation was preserved. After these procedures, we deployed a Xience Sierra stent 3.5 × 18 mm in the ostial LMCA to proximal LAD. A week later, He underwent PCI for to the proximal LAD lesion due to an in-stent thrombosis of a PTFE-CS. Procedures to open the LAD were done with multiple balloon angioplasties and aspiration thrombectomy. We present a case of stent thrombosis after treatment of Ellis type III coronary perforation at a LAD bifurcation, which was successfully treated by an endovascular procedure without diagonal branch obstruction.