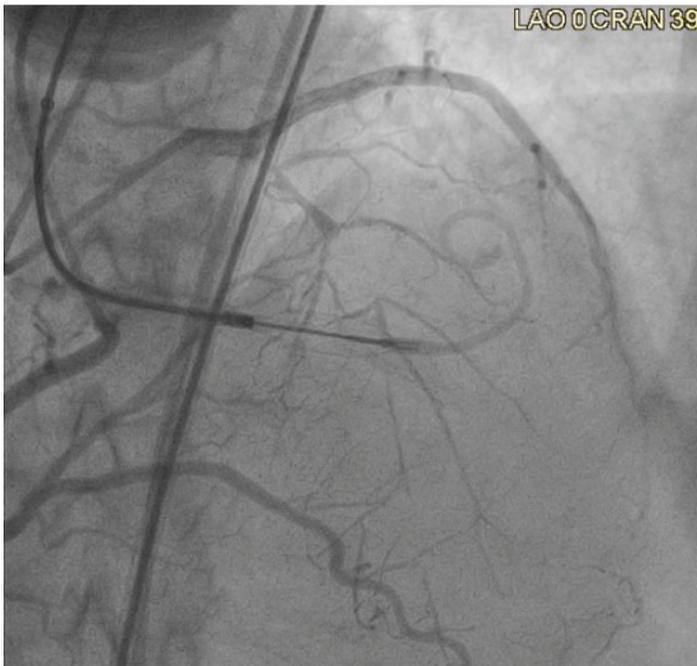


coraForce™ Provides Support for PCI-CTO at Bifurcation

CASE HISTORY

A 77-year-old woman with a history of hypertension, dyslipidemia, diabetes, morbid obesity, and left bundle branch block was referred to our facility. The patient had worsening dyspnea on exertion and had failed PCI of a chronic total occlusion (CTO) at another facility. An abnormal nuclear stress test showed moderate reversible ischemia and newly reduced left ventricular ejection fraction (LVEF) of 30%–35%. The CTO measured 20 mm on angiography, which showed a blunt proximal cap at the diagonal and septal branches in the mid left anterior descending (LAD) artery. There was also a new occlusion in the dominant left circumflex (LCX) artery, which had 90% stenosis.



Baseline angiography

PROCEDURE

Access was obtained in the left and right femoral arteries as well as the right radial artery. A 7Fr sheath and guidewire were inserted in the left femoral artery. The sheath was withdrawn and a 9Fr Impella ECD sheath was inserted to provide hemodynamic support, as the lesion extended to the ostium of the LAD. A 6Fr Expo™ pigtail catheter was inserted in the right femoral artery and advanced to the left ventricle. The Impella ECD was then advanced to the ventricle. A 6F JR 4.0 Launcher™ guide catheter was introduced in the right radial artery and advanced to the right coronary artery and a 7F XB 3.5 in the left coronary.

A SION® blue guidewire was loaded in a 135cm coraForce™ microcatheter and advanced to the proximal cap of the CTO. It was unable to cross the cap owing to deflections into side branches. After multiple attempts, the antegrade approach was abandoned.

PHYSICIAN



Rajiv Tayal

MD, MPH, FACC, FSCAI, RPVI

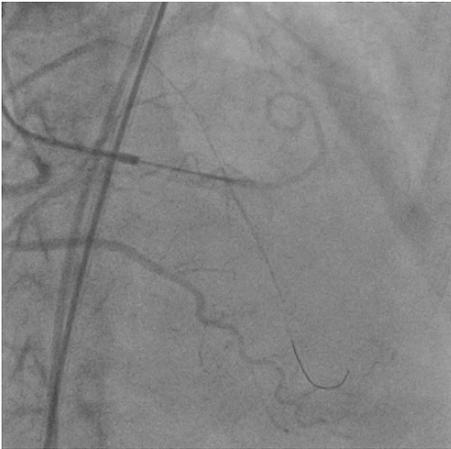
"The coraForce™ allowed very quick antegrade, true luminal crossing of the CTO with a JCTO score of 4 with relative ease and efficiency, as it allowed us to position the microcatheter into the proximal cap of the lesion without being redirected into the large diagonal or septal perforator side branches. I was quite impressed."

Dr. Tayal earned his MD from St. George's University. After performing his residency at St. Michael's Medical Center, Dr. Tayal completed fellowships in advanced heart failure and transplantation, cardiovascular disease, and interventional cardiology at New York Beth Israel Medical Center. Dr. Tayal is the Director of Cardiac Catheterization Laboratory and Structural Heart Program at The Valley Hospital in Ridgewood, New Jersey.

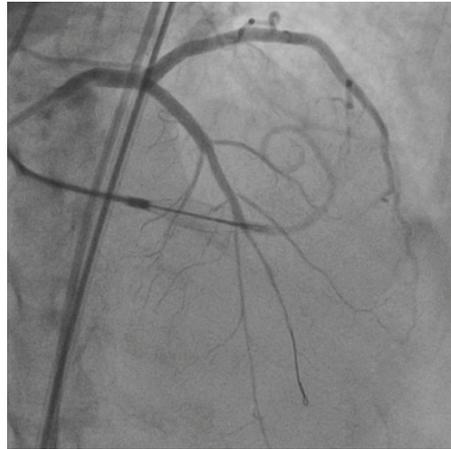
PRODUCTS USED



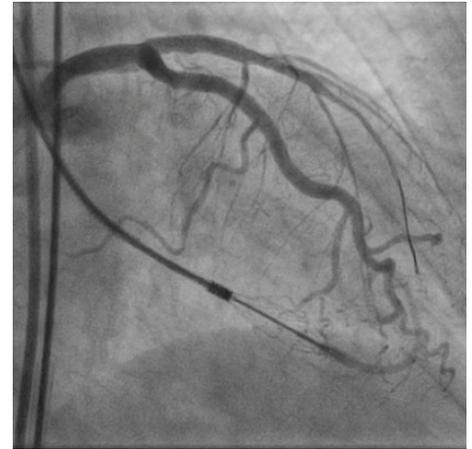
coraForce™ Provides Support for PCI-CTO at Bifurcation



coraForce in mid LAD



Crossing of CTO



Final angiography

The SION® was exchanged for a CONFIANZA® guidewire in the coraForce™ microcatheter. The CONFIANZA® punctured the proximal cap and crossed the CTO. The coraForce™ microcatheter was then able to be advanced through the CTO and into the distal LAD. The CONFIANZA® guidewire was exchanged for the SION® blue and advanced to the distal LAD. The coraForce™ was then removed. Predilatation with a 2.0x26 mm noncompliant (NC) balloon was able to be performed along the LAD to the ostium.

Intravascular ultrasound (IVUS) showed a marked size mismatch between the mid and distal segments of the LAD. A 2.5x26mm Onyx Frontier™ drug-eluting stent (DES) was positioned in the mid LAD and deployed at 14 atmospheres (atm) followed by a 3.0x26mm Onyx Frontier™ placed in an overlapping fashion from the mid LAD to the ostium. Postdilatation was performed first with a 2.75x15mm NC balloon, followed by a 4.0x26mm NC balloon. The LCX was then treated with a 4.0x22mm Onyx Frontier™. IVUS showed the stents to be well expanded, with good apposition. TIMI-3 flow throughout the LAD and side branches was observed. There were no proximal or distal edge dissections.

CASE CONCLUSION

We present successful revascularization of a CTO that had previously failed treatment. The coraForce™ microcatheter was instrumental in enabling true luminal crossing and allowing enough push force to easily traverse the CTO. The patient returned for 30-day follow up and was doing well despite some weakness. Her LVEF had improved to 45%.