CASE STUDY

This Case illustrates the need for THREADER™ as a support for calcified, complex and tortuous anatomy.

Patient History

- 64 year old male
- Former smoker, dyslipidemia, hypothyroidism, obesity
- Presented with worsening exertional angina and referred for coronary angiography

Diagnosis

- Coronary angiogram showed multi-vessel disease with obstructive disease in the LAD, first diagonal, and a subtotally occluded RCA
- Patient refused surgery and underwent successful PCI of the LAD and diagonal
- Returned for PCI of the RCA

Procedure

- Access obtained in the right femoral artery
- RCA engaged with an AL 0.75 guiding catheter
- Angiogram confirmed severe diffuse disease from ostial to distal RCA, with luminal appearance consistent with either a microchannel or collateral, TIMI 1-2 flow (click on video 1)
- Soft, polymer jacketed hydrophilic wire used to probe lumen and successfully crossed into the distal RCA
- Attempted to follow wire with a Corsair™ Microcatheter which would not track beyond the proximal RCA
- THREADER™ balloon used instead of Corsair™ and tracked relatively easily into the distal RCA
- Tip injection through the THREADER™ balloon confirmed presence in the true lumen distally (click on video 2)
- Wire exchanged for a more supportive wire, and the THREADER balloon used to dilate proximal to mid RCA prior to removal (click on video 3)
- Vessel predilated with 2.0 mm Emerge™ PTCA Dilatation Catheter which crossed easily across the tortuosity
- Definitive treatment with 2.25 x 32 mm DES extending from the proximal to distal RCA, resulting in excellent TIMI flow 3 and no residual stenosis (click on video 4)

KEY LEARNING

“A significant advantage of the THREADER balloon over other microcatheters is the ability to dilate the lesion to 1.2 mm which aids subsequent delivery of balloon and stents, shortening procedure time and allowing success in complex anatomy”.

Dr. Mudassar Ahmed, MD
SUMMARY

- This case shows successful treatment of a severely diseased, tortuous and calcified coronary artery. The initial lumen of the artery was less than 1 mm and while a hydrophilic wire did successfully navigate through the stenosis, standard microcatheters would not track over the wire.
- The 0.017” lesion entry profile of the THREADER balloon system allowed it to successfully cross the lesion, with the PowerCoil™ technology transmitting forward motion despite severe tortuosity and stenosis. An over-the-wire system as used in this case then allowed distal tip injection to confirm position as well as wire exchange to a more supportive system.