This case illustrates the need for Opticross™ Coronary Imaging Catheter and Rotablator™ Rotational Atherectomy System to treat long diffused calcified lesions.

**Patient History**

- 59 year old patient
- One year earlier the LAD was treated with a 3.0 mm DES
- This time the patient was admitted to the neighboring hospital due to the new symptoms

**Diagnosis**

- After an unsuccessful attempt to open a calcified lesion in the proximal LCx with a small balloon, the patient was transferred to the University Clinic Hospital for a rotablation PCI procedure (click on video 1)

**Procedure**

- After crossing with a RotaWire, the plaque was modified with the use of a 1.5 mm Burr (click on video 2)
- A smooth channel was created in the proximal LCx and the result was confirmed by angio (click on video 3)
- The RotaWire was exchanged with a regular guidewire for better support and then the lesion was pre-dilatated with a 2.75 mm NC Emerge™ balloon (click on video 4)
- The NC Emerge™ 2.75 mm balloon was inflated for the second time in the proximal segment of the LCx and the pre-dilatation was successfully completed (click on video 5)
- After pre-dilatation a second guide wire was placed in LAD (click on video 6)

**KEY TAKEAWAYS**

- Exceptional deliverability of the Opticross™ Coronary Imaging Catheter is the key to assessing vessels with long diffused calcified lesions
- Rotablator™ Rotational Atherectomy System was used to modify calcified lesion for optimal stent delivery and implantation
- IVUS confirmed presence of diffused calcified lesion in the LCx and LMCA with a need for stenting a long segment of the vessel
- Then, IVUS helped optimize stent implantation and confirm the final result
IVUS Pre Run in the LCx
- The LCx was checked with an Opticross™ Imaging Catheter
- IVUS imaging confirmed presence of a long diffused calcified lesion in the LCx and LM, with a need for stenting of a long part of the vessel
- Frames 650-680 reveal a narrowing
- Beginning with frame 850 the second wire becomes visible — the IVUS catheter enters the LM (click on video 7)

IVUS Pre Run in the LAD
- Another run with the use of the Opticross™ Imaging Catheter was performed in the LM and LAD
to check for any asymmetry or malapposition of the previously implanted stent
- Frames 440-520 (ostium of the LAD) reveal irregularities in shape and need to stent
- In frames 530 – 970 (LM) both wires are visible and there is a lot of diffused calcium (click on video 8)

Left Main MLA Measurement by IVUS
- The Minimum Lumen Area (MLA) was 5.03 mm², below the cut-off limit of 6 mm² required for the LMCA
- IVUS confirmed the need for stenting the LM and the decision was made to cover the entire diseased area with stents (click on video 9)

Stent
- The first 3.0 x 22 mm DES was implanted in the mid segment of LCx (click on video 10)
- Next, Promus Premier™ 3.5 x 16 mm stent was implanted in the Left Main in the direction of the LAD covering the ostium of the LCx (click on video 11)
- A specialty wire was selected to cross a cell of the Promus Premier™ stent entering the LCx and the NC Emerge™ 2.75 mm balloon was introduced there (click on video 12)
- The NC Emerge™ 2.75 mm balloon was inflated successfully and the ostium of the LCx opened (click on video 13)
- A 3.0 x 15 mm DES was introduced in the proximal LCx across the cell of the Promus™ Premier stent (click on video 14)
- TAP (T-Stenting and Protrusion) technique was applied to stent the proximal part of LCx (click on video 15)

Proximal Optimization Technique (POT)
- The final stage was the application of two NC Emerge™ balloons in the sizes 3.0 x 15 mm (LM and LAD) and 2.75 x 15 mm (LM and LCx) in the bifurcation (click on video 16)
- Next, POT technique with a short 4.0 x 8 mm NC Emerge™ balloon was applied in the LM area to achieve the optimal stent expansion and strut apposition (click on video 17)

RESULT
- Optimal result in the region of the LM bifurcation LAD and LCx confirmed by angio (click on video 18)
- This post-IVUS run in the LM confirms that the stent is well expanded and apposed to the vessel wall (click on video 19)

Results from case studies are not predictive of results in other cases. Results in other cases may vary.
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