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MASTER THE COMPLEX™

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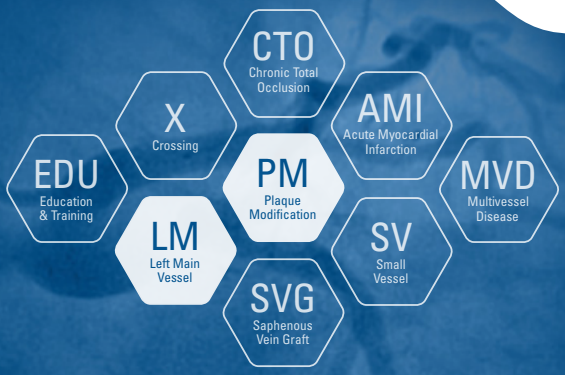

Small balloon in the proximal LCx

Crossing the plaque with 1.5 mm Burr

Angiography

Pre-dilatation with a 2.75 mm NC Emerge™ Balloon

Inflation of NC Emerge™ Balloon

Placement of guide wire in LAD

CASE STUDY

MASTER PLAQUE MODIFICATION TO TREAT DIFFUSED CALCIFIED LESIONS WITH IVUS SUPPORT

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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 with Opticross™ Catheter

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 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)**

IVUS Pre Run in the LM and LAD with Opticross™ Catheter

Left Main measurement

Left Main MLA Measurement by IVUS

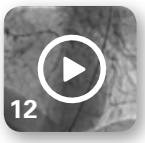
- The Minimum Lumen Area (MLA) was 5.03 mm^2; below the cut-off limit of 6 mm^2 required for the LMCA
- IVUS confirmed the need for stenting the LM and the decision was made to cover the entire diseased area with stents **(click on video 9)**

Stent

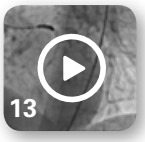
- The first 3.0 x 22 mm DES was implanted in the mid segment of LCx **(click on video 10)** Next, Promus Premier™ 3.5 x 16 mm stent was implanted in the Left Main in the direction of the LAD covering the ostium of the LCx **(click on video 11)**
- A specialty wire was selected to cross a cell of the 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)**

Implantation DES in mid segment of LCx

Implantation of 3.5 x 16 mm DES in Left Main



Introduction of NC Emerge™ 2.75 mm balloon



Inflation of NC Emerge™ Balloon

Placement of a 3.0 x 15 mm DES

TAP technique

Application of two NC Emerge™ Balloon in the bifurcation

POT technique

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)**

Optimal result of LM, LAD and LCx

Well-apposition of the stent to the vessel wall

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