Excimer Laser Atherectomy for a Long, Diffusely Diseased, Moderately Calcified Right Coronary Artery

Case History
- 75-year-old male
- History: Dyslipidemia, insulin dependent diabetes, hypertension with a history of CAD, positive stress test.

Angiography
- Subtotal occlusion
- RCA: Long diffuse disease, moderately calcified
- LAD: Patent with minor luminal irregularities
- Circumflex: 50% stenosis in the mid portion

Intervention
- RCA was engaged with a 6F FR4 guide
- 0.014" Asahi guidewire was inserted into the RCA along with a .014x135 Quick-Cross support catheter to help cross the lesion
- 0.9mm X80 ELCA catheter was used at 50 fluence/40Hz
- PTCA was then performed with a 2.5mm Maverick at 14 ATMs
- Xience 3.0x28 stent was placed in the RCA deployed at 18 ATMS
- PTCA post stent deployment was performed with a 2.50x12mm Quantum Maverick

OPERATOR / FACILITY
Antonis Pratsos, MD
Bryn Mawr Hospital,
Main Line Health System
Bryn Mawr, Pennsylvania

DEVICES
Guide
- 6F FR4 guide catheter (Boston Scientific®)

Wire
- 0.014" Grandslam Wire® (Asahi®)

Support Catheter
- 0.014"x135cm Quick-Cross® (Spectranetics®)

Lasers
- 0.9mm X80 ELCA® (Spectranetics®)

Balloons
- 2.5x20mm Maverick® (Boston Scientific®)
- 2.5x12mm Quantum Maverick® (Boston Scientific®)

Stents
- 3.0x2.8mm Xience® (Abbott Vascular®)

Anticoagulation
- Angiomax® (The Medicines Company®)

FEATURED SPECTRANETICS PRODUCTS
- ELCA® Coronary Laser Atherectomy Catheter
- Quick-Cross® Support Catheter
Excimer Laser Atherectomy for a Long, Diffusely Diseased, Moderately Calcified Right Coronary Artery

Results / Conclusions

- TIMI 3 Flow
- As demonstrated in this case, laser ablation was performed to treat a moderately calcified long lesion in the RCA
- 0.014x135cm Quick-Cross was used to facilitate the wire crossing the calcified lesion
- The 0.9mm X80 ELCA was used to treat the underlying calcium resulting in easy delivery of balloons & full apposition of the stent

Important Safety Information

ELCA® X-80 Coronary Laser Ablation Catheter

INDICATIONS
The X-80 Laser Catheters are intended for use as a stand-alone modality or in conjunction with Percutaneous Transluminal Coronary Balloon Angioplasty (PTCA) in patients who are acceptable candidates for coronary artery bypass graft (CABG) surgery. The following Indications for Use, Contraindications and Warnings have been established through multicenter clinical trials. The Spectranetics CVX-300® Excimer Laser System and the multifiber laser catheter models are safe and effective for the following indications:
- Occluded saphenous vein bypass grafts
- Ostial lesions
- Long lesions – (greater than 20mm in length)
- Moderately calcified stenoses.
- Total occlusions traversable by a guidewire.
- Lesions which previously failed balloon angioplasty - This includes those lesions that were treated unsuccessfully by PTCA. Lesions that have undergone a complicated PTCA procedure are not included in this category. These lesions must be traversable by a guidewire and composed of atherosclerotic plaque and/or calcified material. The lesions should be well defined by angiography.

CONTRAINdications
- Patient has acute thrombosis.
- Lesion is in an unprotected left main artery.
- Patient has experienced an acute myocardial infarction.
- Patient has ejection fraction of less than 30%.
- Lesion is beyond acute bends or is in a location within the coronary anatomy where the catheter cannot traverse.
- Guidewire cannot be passed through the lesion.

Quick-Cross® Support Catheter

INDICATIONS
Quick-Cross Support Catheters are guidewire exchange and infusion devices designed for use in the vascular system. The catheters are intended to support a guidewire during access of vasculature, allow for exchange of guidewires and provide a conduit for the delivery of saline solutions or diagnostic contrast agents.

CONTRAINdications
None known.
See complete IFU for more information before attempting use of Quick-Cross.

ADVERSE EVENTS
Atherectomy or any other surgical procedure has inherent risks. For a completing listing, see the IFU.

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Laser Ablation for Coronary Intervention: Case Study

The 0.9mm X80 helped modify the calcium and improved vessel compliance allowing for easy delivery of balloons and stent.

– Antonis Pratsos, MD

At the time of publication, Dr. Pratsos has a consulting agreement with Spectranetics.

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