PHILIPS

Case review

Laser atherectomy

Excimer laser atherectomy for a CTO of the circumflex artery

Laser ablation for coronary intervention

Operator and facility

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Case history

- 67-year-old male
- History: hypertension, hyperlipidemia, and diabetes; family Hx of CAD, with a positive stress test

Angiography

- LAD: patent
- Circumflex: CTO in proximal segment
- RCA: stenoses patent collaterals to the circumflex

Intervention

- LAD was engaged with a 8 Fr JL4 guide
- 0.014" Asahi guidewire was inserted into the circumflex
- RCA was engaged with a 6 Fr JR 4 guide
- Simultaneous injections performed to assess collateral circulation and evaluate the distal circumflex, as well as facilitate wire crossing (figure 1)
- 0.9mm X80 was used at 50 fluence/40Hz used in the circumflex (figure 2)
- PTCA post laser ELCA catheter was performed with a 3x20mm Quantum Maverick (figure 3)
- Xience 3x23mm was deployed in the proximal circumflex

Results and conclusion

- As demonstrated in this case, laser ablation was performed to treat a CTO in the circumflex artery (figure 4)
- The 0.9mm X80 ELCA catheter was used to create pilot channel restoring flow to the distal circumflex artery
- The laser allowed definitive therapy which included the placement of a DES

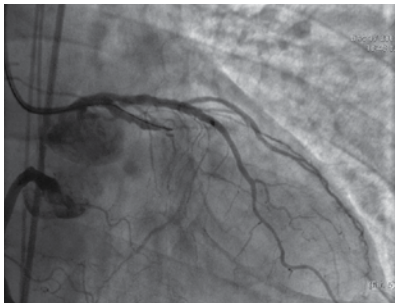

Figure 1: CTO simultaneous injections

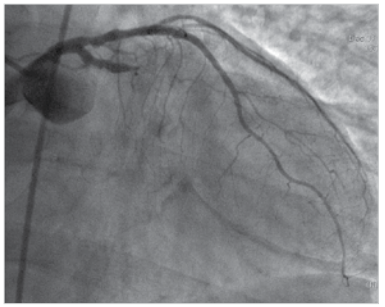

Figure 2: ELCA CTO

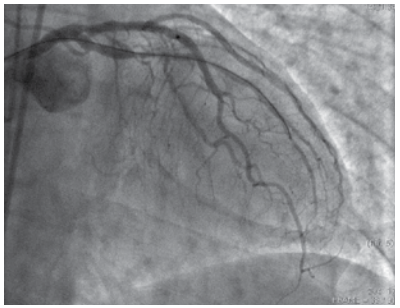

Figure 3: CTO post laser

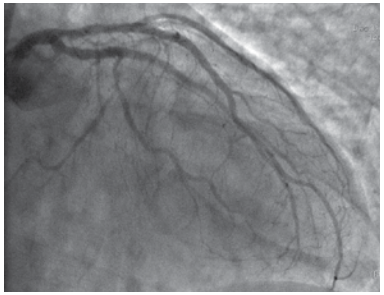

Figure 4: CTO final

"The 0.9mm X80 created a channel in the circumflex, restoring flow and allowing placement of a DES."

Antonis Pratsos, MD

Dr. Pratsos has been compensated for his services in preparing this material for further use and distribution by Philips.

Devices

Guide: 8F JL4 guide catheter (Boston Scientific),
6F JR4 guide catheter (Boston Scientific)

Wires: 0.014” Grandslam Wire (Asahi), 0.014” Prowater Wire (Asahi)

Support catheter: 0.014” X 135cm Quick-Cross (Philips)

Lasers: 0.9mm X80 ELCA (Philips)

Balloon: 3x20mm Quantum Maverick (Boston Scientific)

Stents: 3.0x23 Xience (Abbott Vascular)

Anticoagulation: Integrilin (Millenium Pharmaceuticals)

Featured: ELCA coronary laser atherectomy catheter

Important safety information

ELCA

Indications: The laser catheters are intended for use either 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 Philips CVX-300 Excimer laser system and the multi-fiber 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 stenosis, total occlusions traversable by a guidewire, lesions which previously failed balloon angioplasty, restenosis in 316L stainless steel stents, prior to the administration of intravascular brachytherapy. 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: Lesion is in an unprotected left main artery. 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. Lesion is located within a bifurcation. Patient is not an acceptable candidate for bypass graft surgery.

Potential adverse events: Use of the Philips CVX-300 Excimer laser system may contribute to the following complications: dissection of the arterial wall, perforation, acute reclosure, embolization, aneurysm formation, spasm, coronary artery bypass graft surgery, thrombus, myocardial infarction, arrhythmia, filling defects, death. No long term adverse effects of ELCA are known at this time.

Risks: The primary endpoint defined in the laser angioplasty of restenosis stents (LARS) randomized trial was the absence of major adverse cardiac events (MACE) at 6 months: Death; myocardial infarction; coronary artery bypass surgery. Procedural complications include: any dissection, acute thrombus, haziness, no reflow, arrhythmia, acute vessel closure, occlusion of side branch, occlusion non-target, coronary spasm, coronary embolism, coronary perforation, laser/stent damage, balloon/stent damage, and other serious.

The opinions and clinical experiences presented herein are for informational purposes only. Individual results may vary depending on a variety of patient-specific attributes and related factors. Results from this case study are not predictive of future results.

Images provided courtesy of Antonis Pratsos, MD.

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