

Register Now For This Upcoming Interventional Cardiology Conference

The Emory Practical Intervention
Course Southeast Consortium (EPIC-SEC)
March 3-5, 2016

Emory Conference Center Hotel
1615 Clifton Rd NE
Atlanta, GA, 30329

The Emory Practical Intervention Course (EPIC) has been an annual event since 1981, providing training for thousands of the most active interventional cardiologists in the country. This course will feature the cumulative wisdom of 15 academic centers featuring live case demonstrations, presentations and discussions of complex cases, debates between well-known interventionalists and surgeons and the opportunity for insightful audience participation and discussion. The national concern regarding appropriate selection for diagnostic studies and intervention will be addressed in detail.

This course is designed for interventional cardiologists, cardiologists, cardiac nurses, nurse practitioners and physician assistants, cardiac and vascular surgeons, interventional radiologists and other health care professionals interested in the optimal practice of interventional cardiovascular medicine.

For additional course details and registration information, visit: medicine.emory.edu/cardiology/education/cardiology-cme-events.html.

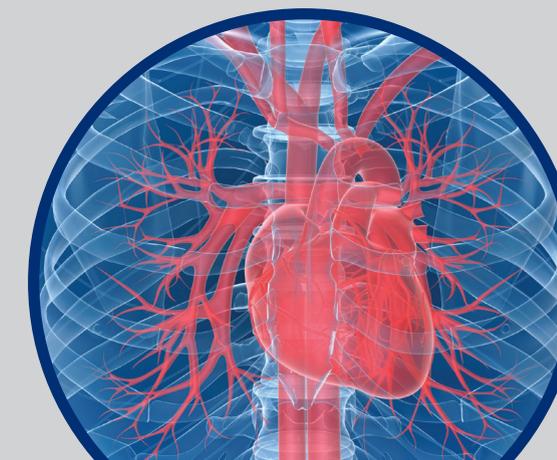
101 W. Ponce de Leon Ave.
4th Floor
Decatur, Georgia 30030

Emory Remains at Forefront of Interventional Cardiology: *Antegrade, Retrograde and Hybrid Percutaneous Coronary Intervention to Treat Severe Coronary Artery Disease*

A 40-year-old man presented to an outside institution with a high-risk non-ST segment elevation myocardial infarction (NSTEMI). Angiography revealed a 90% ulcerated first obtuse marginal (OM1) lesion and a 100% chronic total occlusion (CTO) of the mid-portion of the right coronary artery (RCA). He underwent percutaneous coronary intervention (PCI) of the OM1 and was started on medical therapy, including aspirin 81 mg, clopidogrel 75 mg, atorvastatin 80 mg, metoprolol 50 mg BID, isosorbide mononitrate 30 mg and amlodipine 5 mg. At a four-month follow-up, he reported continuing class III angina despite optimal medical therapy. A nuclear stress test revealed a 15% reversible defect in the inferior wall in the distribution of the RCA. At that time, he was referred to Emory for further evaluation and treatment.

CTOs are found in as many as 15% of patients who undergo coronary angiography. Traditionally, the success rate of PCI to treat CTOs has been in the 50% range, due to the difficulty in wiring these chronic blockages. As a result, symptomatic patients with CTOs are often either treated medically or referred for coronary artery bypass graft (CABG) surgery when other significant disease is present.

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Treating Severe Coronary Artery Disease continued

However, recent advances in techniques and equipment have been shown to increase success rates to as high as 90%. To accomplish this, interventional cardiologists in select centers across the United States, including Emory University, now deploy a “hybrid strategy” that includes some combination of traditional wire escalation techniques, sub-intimal dissection and re-entry, and a retrograde approach. This strategy increases the chances for successful and safe recanalization and stenting of total occlusions in appropriate patients.

At Emory, the patient met with the Interventional Cardiology team to discuss the option of CTO PCI. He was informed that the procedure was likely to reduce his angina burden and allow him to discontinue his anti-anginal medications, and he elected to proceed.

In the catheterization lab, sheaths were introduced to both femoral arteries. Simultaneous dual injections showed an ambiguous proximal cap, a lesion length of more than 20 cm and a sub-optimal re-entry segment (Figure 1), which would make antegrade true-to-true lumen crossing or antegrade dissection less likely to succeed based on the hybrid algorithm. Given the favorable retrograde septal collateralization (Figure 2), the team decided to use a retrograde approach to wire the vessel and perform the intervention.

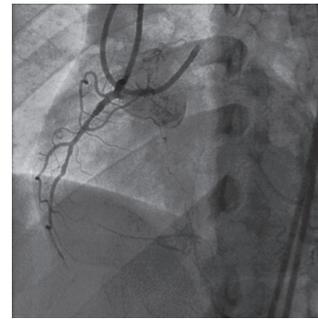


Figure 1. Dual injection to assess lesion length and proximal cap.

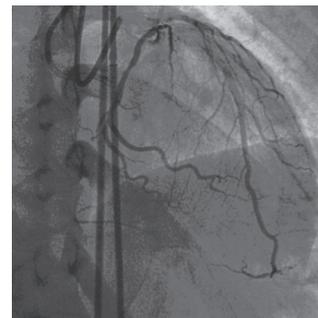


Figure 2. Septal collaterals from left anterior descending artery (LAD) to posterior descending artery (PDA).

Using specialized wires, a microcatheter was introduced retrograde from the left anterior descending artery (LAD), across the septal perforators and ultimately to the distal RCA (Figure 3). Subsequently, the wire was advanced through the distal cap of the occlusion, and the lesion was successfully crossed retrograde (true-to-true retrograde lesion crossing). The antegrade guide was wired and externalized (Figure 4). The microcatheter was then backed up into the septal collaterals while ensuring that the retrograde guide did not become deep seated in the left main coronary artery. Finally, the lesion was pre-dilated with a semi-compliant balloon and three drug-eluting stents were placed, resulting in excellent distal outflow and preservation of the side branches (Figure 5). At a three-month follow-up with his referring physician, the patient reported resolution of his angina without the use of anti-anginal medical therapy.

This case demonstrates the feasibility and safety of CTO intervention in the hands of experienced operators.

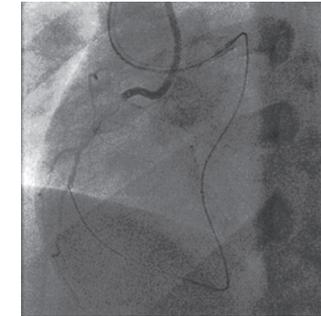


Figure 3. Microcatheter crossing septal collateral vasculature.

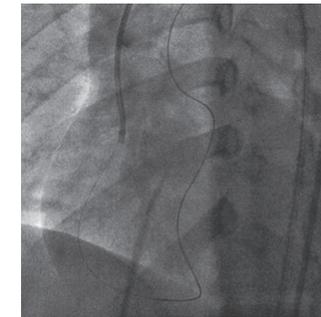


Figure 4. Wire externalization.



Figure 5. Final result with three drug eluting stents demonstrating good distal runoff.

Emory Heart & Vascular Center interventional cardiologists are using innovative techniques and the latest research and technology to find even more ways to successfully treat cardiovascular disease in the least invasive ways possible.

Our goal is to work with you on a collaborative basis to provide the most appropriate treatment for your patient.

Our Team

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If you have patients with a history of heart or vascular disease or who have recently received a diagnosis, you can refer them to an Emory interventional cardiologist quickly and easily by calling the Emory Physician Consult Line at 404-778-5050 or 1-800-22-EMORY (1-800-223-6679) between 7 a.m. and 7 p.m., Monday through Friday.