



# TEXAS HEART INSTITUTE CARDIAC SOCIETY

Fall 2016

## MESSAGE FROM THE PRESIDENT

Greetings! We had an exciting year with a successful Texas Heart Institute Cardiac Symposium/Igor Palacios Lectureship.



I would like to thank Dr. Guilherme Silva for his assistance with developing the program and Jackie Berry for her tireless support. In the coming year, we are planning an exciting program rich in structural and high-risk percutaneous coronary intervention case presentations and with a focus on vascular medicine. This year, we are fortunate to have Dr. Igor Palacios, Dr. Valentin Fuster, and Dr. Jihad Mustapha among our distinguished faculty. We look forward to your participation in our program.

In our continuing efforts to showcase cases performed by local, national, and international graduates, one of our outstanding fellows, Dr. Salman Bandeali, has submitted a challenging case of chronic total occlusion treated by our own Dr. George Younis and Dr. Guilherme Silva. Please submit your interesting cases so that we may share them with the THI community.

Eduardo Hernandez, MD, FACC

## CASE REPORT

*Salman Bandeali, MD,  
David Kuten, MD  
George Younis, MD  
Guilherme Silva, MD*

A 61-year-old woman with hypertension, hyperlipidemia, diabetes, and rheumatoid arthritis was referred to our institution for testing after reporting stable exertional chest discomfort while performing household chores or walking up 8-10 steps. The discomfort resolved with rest.

Five years earlier, for similar symptoms, she had undergone percutaneous coronary intervention (PCI) of the proximal right coronary artery (RCA) with a 3.5×12 ION stent. When her symptoms recurred, her condition was evaluated by her primary cardiologist. A myocardial perfusion scan was normal, but because the patient had persistent symptoms suggestive of typical angina, coronary angiography was performed, revealing complete total occlusion (CTO) of the ostial RCA stent (Figure 1). The RCA was collateralized by septal collaterals (large 1st septal) from the left anterior descending coronary artery, which was filling the posterior descending and posterolateral ventricular branches up to the mid RCA (Figure 2). Medical therapy

was initiated with metoprolol, isosorbide mononitrate, and ranolazine.

Because the patient's class III angina was refractory to maximal medical therapy, revascularization options (percutaneous and surgical) were reviewed with the patient. She opted for a percutaneous attempt at RCA CTO revascularization.

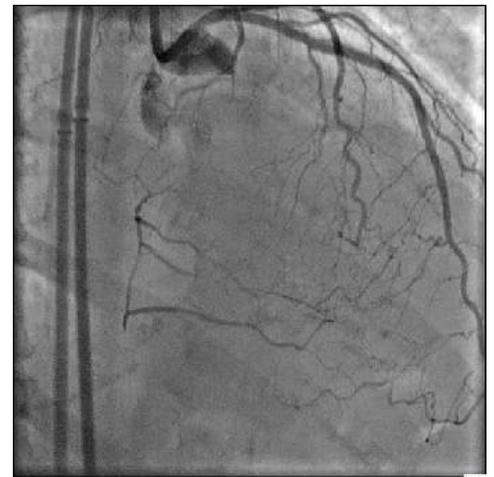
Both common femoral arteries were accessed, and long 8F sheaths were placed in each groin. The RCA was cannulated with an 8F JR4 guide via the left groin, and several attempts were made to cross the lesion in antegrade fashion (wires included Whisper, PT Graphix, and MiracleBros), but these were ultimately unsuccessful.

A retrograde approach was then attempted. An 8F XB 3.0 guide catheter was used to access the left main coronary artery via the right groin. The first septal perforator was then accessed with a 0.014" Runthrough wire supported by an Asahi Corsair Microcatheter, and the wire was advanced into the distal septal branches. A collateral vessel to the posterior descending artery was accessed, and the wire was maneuvered into the proximal RCA, just distal to the existing ostial stent. The Corsair was advanced to the same level,

*(continued on page 2)*

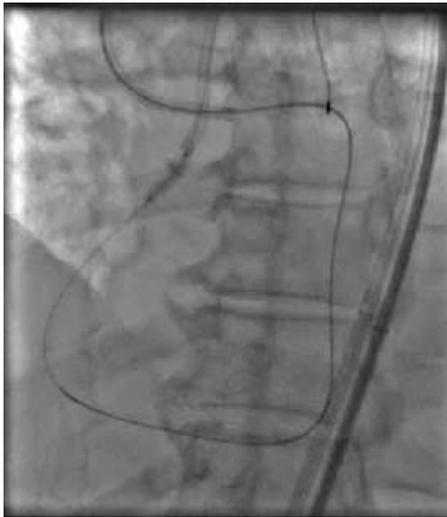


**Figure 1.** Right coronary angiogram showing chronic total occlusion of the RCA.



**Figure 2.** Right coronary artery collateralized by septal collaterals (large 1st septal) from the left anterior descending artery.

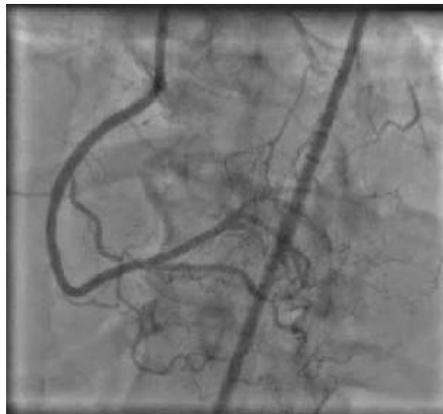
and the wire was then exchanged for a 0.014" MiracleBros 6 wire, which was used to cross the occluded stent in retrograde fashion. The wire was then directed to enter the JR guide, was advanced through the length of the guide, and was ultimately



**Figure 3.** Antegrade balloon dilation of the ostial RCA CTO after crossing via retrograde approach.

externalized through the 8F groin sheath (body floss technique).

Next, a monorail 2.5×15-mm non-compliant balloon was advanced over the externalized wire through the JR4 guide into the occluded ostial RCA stent and inflated to 12 atmospheres (Figure 3). A prolonged inflation was then performed with a 2.5×10-mm Flextome cutting bal-



**Figure 4.** Final right coronary angiogram after stent deployment.

loon. Antegrade angiography revealed significant residual stenosis of approximately 20 mm that was distal to the existing stent. Therefore, a 2.75×38-mm Synergy monorail stent was advanced through the prior stent, positioned with its proximal portion at the RCA ostium, and inflated to 11 atmospheres. Post-dilation was performed with a 3.0×20-mm noncompliant balloon. Subsequent angiography showed excellent results, including TIMI III antegrade flow (Figure 4). Two weeks later, the patient was seen in clinic and reported complete resolution of her angina.

#### DISCUSSION

Complete total occlusion amounts to 20% of coronary angiographic findings. The chief reason for performing CTO revascularization is relieving the burden of ischemia and symptoms affecting the patient's quality of life. Our case shows a successful retrograde PCI of the ostial RCA CTO that completely resolved the patient's symptoms and consequently improved her quality of life. 

## NEWS AND UPDATES

### IN MEMORIAM

#### *Dr. Denton A. Cooley*

We are deeply saddened by the recent death of Dr. Denton Cooley, world-renowned cardiac surgeon, medical pioneer, and founder of the Texas Heart Institute. Words cannot express how deeply indebted we are to his contributions to the field of cardiovascular surgery. His impact played a key role in the realization of the Texas Medical Center as a beacon of hope to the sickest patients with advanced cardiovascular disease. His indelible legacy continues to grow through the graduates of our training programs. Our thoughts and prayers are with his family and friends. Please read the attached heart-felt message from Dr. James T. Willerson.

#### *Dr. Maria T. Falcone*

Dr. Maria T. Falcone, 49, passed away on January 23, 2016, at Barnes-Jewish Hospital in St. Louis. She was a colleague of mine, graduating with me from the THI program in 2000. I remember her as a kind, generous, and brilliant person and an outstanding physician. Her dedication to her patients was palpable, earning her the CCU Fellow of Year Award, and she served as Chief Fellow. Upon graduation, she joined Prairie Cardiovascular Consultants, Ltd., in Carbondale, Illinois. She is survived by her husband Jeff and her children Valerie and Gabriel.

### CONTACTING FELLOWS

I am frequently contacted by former fellows and physicians in the community requesting information about our current fellows-in-training, with an interest in hiring them. Our fellowship program produces outstanding graduates who excel in the communities that are lucky enough to adopt them, and they are regarded highly by their colleagues. You may contact us with inquiries about our fellows at [staylor3@stlukeshealth.org](mailto:staylor3@stlukeshealth.org).

## UPCOMING EVENTS

**DECEMBER 9, 2016**

**16th Texas Update in  
Cardiovascular Advancements**

**DECEMBER 10, 2016**

**7th Annual Symposium on Risk,  
Diagnosis and Treatment of  
Cardiovascular Disease in Women**

**DECEMBER 16, 2016**

**Cardiology Fellows' Annual  
Holiday Party**

**MAY 19, 2017**

**The 9th Annual Texas Heart  
Institute Cardiac Society  
Symposium**

*And Igor F. Palacios, MD, Distinguished  
Lectureship in Cardiology*

To the Texas Heart Institute Family,

*“Strange is our situation here on Earth. Each of us comes for a short visit, not knowing why, yet sometimes seeming to divine a purpose. From the standpoint of daily life, however, there is one thing we do know, that man is here for the sake of other men — above all those upon whose smiles and well-being our own happiness depends.”*

– Albert Einstein

Einstein must have had Dr. Denton A. Cooley in mind when he wrote this message.

We said goodbye to Dr. Cooley this week in a beautiful ceremony at Trinity Episcopal Church in downtown Houston. His eldest daughter, Mary Cooley Craddock, and his son-in-law and Surgeon-in-Chief at the Texas Children’s Hospital, Dr. Charles D. Fraser, Jr., eulogized Dr. Cooley, emphasizing the personal side of him and his love of family, loyalty to his THI team and his friends, pride in the Texas Heart Institute and desire to see it flourish long after he was gone, and his dedicated care of patients. In addition to his greatness as a heart surgeon, these were all qualities we recognized as being part of Dr. Cooley and that we admired and were inspired by to do our best in our professional and personal efforts, and make the “patients come first.”

The Texas Heart Institute that Dr. Cooley built has a name and a reputation that are recognized throughout the world as a place in Houston, Texas where great cardiac care has been given and continues to be available to patients with every imaginable cardiovascular disease, some so serious they have been told by physicians in other places they are “too sick to be helped” and the “risk of helping them is too great” and “they are beyond the ability of that center to help them.” Here, most often these same patients are helped and returned to a useful and productive life. The Texas Heart Institute is also recognized worldwide as a “go-to place” to receive the highest quality of training to become an outstanding heart surgeon, cardiologist, interventional cardiologist, electrophysiologist, anesthesiologist, pathologist, and more. We are also recognized as the home of the original development and clinical application of left ventricular assist devices and for helping more patients with severe heart failure with these devices than any other place in the world. Today, we are also recognized for the pioneering work that is ongoing here in the detection of vulnerable atherosclerotic plaques and their treatment, as well as for new cell-based therapies to help regenerate injured hearts and blood vessels.

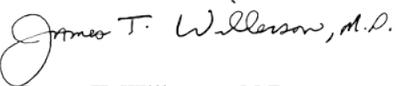
It is fair to state that within the world-famous Texas Medical Center, the largest in the world, the most widely recognized names in most foreign countries are the Texas Heart Institute and The University of Texas M.D. Anderson Cancer Center.

For the Texas Heart Institute, that reputation has been built through the pioneering efforts of Dr. Cooley and the outstanding cardiac surgeons that were part of his team; the equally outstanding cardiologists working across the spectrum of cardiovascular disease; and the nurses, technical support staff, and other members of our professional staff. These efforts have been almost entirely supported for more than 50 years by grants and philanthropy, most often from generous and grateful Houstonians.

We are not finished. The Texas Heart Institute will expand its efforts to help large numbers of patients with cardiovascular disease and even broaden efforts to continue the development of interventional and surgical therapies that are increasingly minimally invasive and catheter based, while maintaining our great skills in and advancing cardiovascular surgery and cardiac support devices. Likewise, we seek to further develop and clinically apply cell-based and gene-manipulation therapies that in the future, we believe, will often prevent cardiovascular disease in humans, and when that is not possible, to modify the cardiovascular problems so that patients live long and productive lives.

To Dr. Cooley, we say this: We are very grateful for your mentoring, your leadership, your inspiration, your encouragement, and the personal example you have set for all of us. Please be assured that we shall continue what you began. We shall see it through until cardiovascular disease is no longer the major killer of men, women, and children throughout the world.

With my respect and gratitude,

  
James T. Willerson, M.D.



*This floral arrangement, representing the Symbol of Excellence, was displayed at the memorial service for Dr. Denton A. Cooley. A recording of this week’s service can be viewed online at [www.dentonacooley.org/](http://www.dentonacooley.org/).*