

CARDIOVASCULAR
Physician



First in Area
to Offer
WATCHMAN™
Device

Geographic Model of Care Earns High Marks



In June 2016, we will complete construction of the Heart Hospital at MedStar Washington Hospital Center. Several years of planning, complex logistics and the hard work of hundreds of people will come to an end. But the Heart Hospital is more than just paint and plaster. This state-of-the-art new space has given us a unique opportunity to re-engineer our model of care.

Geographic physical consolidation of cardiovascular patients has led the way to development of a geographic care model. It has already been implemented on the new cardiology nursing unit on the fourth floor of the Heart Hospital, which opened in December 2014. In less than six months, we've seen dramatic proof of the model's value: Patient and associate satisfaction has climbed significantly.

BOOSTING ACCOUNTABILITY

The new model creates accountability for patient outcomes to a stable team of caregivers. Teams own their unit's efficiency, quality, patient satisfaction and performance objectives. In the past, a legion of caregivers would come in and out of patient rooms—sometimes seeing the patient once and never again. Now a dedicated team of cardiologists, nurse practitioners and nurses are assigned to each patient 24/7.

A MedStar Heart & Vascular Institute faculty cardiologist serves as a unit's attending physician who is ultimately responsible for supervising the patient's care plan, as well as for individual and aggregate patient outcomes and satisfaction. This attending physician provides constancy and consistency for patients, their physicians and other caregivers.

Combined physician and nurse rounding fosters collaboration between associates and has greatly enhanced associate satisfaction. Patients see a consolidated team in charge, easing confusion and concern. They know to whom they should address questions—and feel confident that they will receive reliable responses.

LESS SEGMENTED CARE

This is a far more efficient way to deliver services, which boosts continuity of care, improves communication and increases patient confidence.

It is true patient-centered care, a less segmented approach that breaks down silos between providers. And it more clearly ties a single team to patient outcomes. Caregivers feel more empowered, and patients and families are more engaged.

There are real benefits for independent ("private") cardiologists, as well. They now have the option of either admitting a patient to the faculty cardiologist service, or they can admit patients to a cardiac hospitalist, remain engaged in a consulting capacity and continue to direct their patient's care.

Developing and implementing the model would not have been possible without strong physician leadership—across our specialties and subspecialties. Drs. Allen Taylor, Edward Woo, Paul Corso and Jonathan Patrick are committed to creating novel approaches for delivering quality cardiovascular care in their respective areas. They have rallied a multidisciplinary team to work with them to put the plan into action in patient care every day.

The geographic model is one element of the "MedStar Heart & Vascular Institute way." It, and implementation of best practices across the board, are ensuring there is real quality behind the MHVI brand. It represents an inevitable evolution of the Institute—now five years strong and always progressing.

Glenn Meininger, MD

An Engineer of the Heart

Long before Glenn Meininger, MD, became director of Electrophysiology and associate chief of Cardiology at MedStar Franklin Square Medical Center, he was a star soccer player at the University of Pennsylvania. In addition to being the Quakers' goalie, he was co-captain during his senior year and earned Academic All-Ivy League honors while double-majoring in mechanical engineering and finance.

So when Dr. Meininger entered The Johns Hopkins University School of Medicine, his first thought—since he had a mechanical engineering degree—was orthopaedic surgery, but he found himself drawn to the intricacies of cardiology.

"The mechanics and complexities of the heart as a pump and a complex electrical circuit appealed to my engineering background," Dr. Meininger says. "And, you see things in cardiology that you don't experience in other fields."

Because engineers are natural problem-solvers, Dr. Meininger's focus on electrophysiology—the science of diagnosing and treating the electrical activities governing the heart's rhythms—makes sense.

"Like a puzzle, you have to piece together information that might influence a patient's condition and treatment," he says. "You can never predict what you'll come across. And, it's a field where you see all kinds of patients—kids and adults, preventive care and end of life care. You get a true slice of the population, and you get to follow them over the long term as you help manage their health."

In helping patients with atrial fibrillation, or A-fib, for example, cardiac electrophysiology must consider such things as the patient's activity level, sleep habits, nutrition, breathing, diabetes management and weight.

"Understanding all these factors and how they interact allows you to treat the patient in a more holistic way, rather than homing in on a specific issue," Dr. Meininger says, adding that procedures for treating A-fib and arrhythmic conditions have rapidly evolved during the past decade.

"Electrophysiology is at the forefront medical development," he says. "Where once we treated patients mainly with medication, we now have a wide range of device therapies, such as pacemakers and defibrillators, new mapping and imaging techniques, and recently introduced left atrial appendage occlusion devices to protect against stroke. In addition, we have various types of ablation procedures that can eliminate rhythm problems and let patients lead full, fruitful lives."

Another technological development has been the emergence of tiny implantable monitors that record heart rhythm data for a patient over a long period. This provides valuable information about events, regardless of when they occur.

"With the amount of patient data available to us now, we're better positioned than ever to diagnose and treat heart rhythm issues," Dr. Meininger says. That's a message he tries to convey to his medical students and residents.

"There's an inherent notion of wanting to come up with 'the answer' for a diagnosis as quickly as possible, but medicine doesn't work like that," he explains. "The last thing you want to do is start a diagnosis and not give full, careful consideration to everything that could affect it. You have to observe all of the data. Thanks to modern electronic medical records and other technologies, we can access that data and make appropriate patient care decisions."



"There's an inherent notion of wanting to come up with 'the answer' for a diagnosis as quickly as possible, but medicine doesn't work like that... You have to observe all of the data."



(L to R) Sarfraz Durrani, MD, Robert Lager, MD, Manish Shah, MD, and Lowell Satler, MD

MEDSTAR HEART & VASCULAR INSTITUTE First in Area to Offer the WATCHMAN™ Device

Stroke Prevention Device Proven Option for Some A-Fib Patients

On June 16, a team of cardiac specialists at MedStar Heart & Vascular Institute (MHVI) became the first in the metropolitan Washington area to successfully implant WATCHMAN™—a potentially life-changing device proven to reduce the risk of stroke in certain patients with non-valvular atrial fibrillation (A-fib). The procedure was performed at MedStar Washington Hospital Center, hub of MHVI, just three months after the breakthrough therapy received FDA-approval.

The most common cardiac arrhythmia in adults, A-fib currently affects more than five million Americans—a figure that keeps growing as the population ages. A-fib causes about 20 percent of all strokes today, and individuals with the condition are five times more likely to have a stroke than others. Strokes from A-fib are also particularly severe and twice as likely to cause death or incapacitation compared to strokes not associated with A-fib.

“Patients with A-fib must take blood thinners to minimize their stroke risk, yet many of them have difficulty with compliance,” says Lowell Satler, MD, director of the Cardiac Catheterization Lab at the Hospital Center. “But

one of the biggest issues with blood thinners is bleeding, particularly with warfarin. Even the newer classes of oral anticoagulants can pose problems. As a result, up to 45 percent of the total A-fib population may go untreated and, by extension, unprotected from stroke.”

The vast majority of A-fib-related strokes originate in the left atrial appendage (LAA), a sub-chamber of the heart where blood can pool and form clots. In turn, those clots may then escape into the circulation and block blood flow to brain tissue.

WATCHMAN is designed to stop that from happening.

“By preventing the formation of blood clots within the LAA, WATCHMAN can both reduce the risk of stroke and eliminate the need for long-term anticoagulation therapy in a substantial population of patients with atrial fibrillation,” explains Zayd Eldadah, MD, PhD, director, Cardiac Electrophysiology (EP).

Available internationally since 2009, WATCHMAN is currently approved in more than 70 countries and has been implanted in 10,000 patients worldwide.

MedStar Heart & Vascular Institute contributed to the research leading up to the device's FDA approval. Ron Waksman, MD, interventional cardiologist and director of Cardiovascular Research and Advanced Education at MHVI, initiated participation in the PROTECT AF clinical study, one of several launched by WATCHMAN's manufacturer.

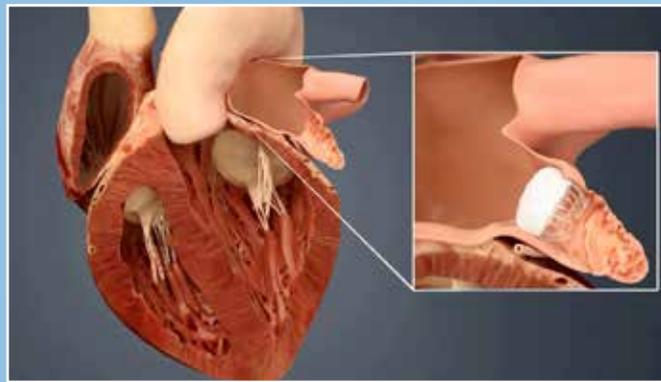
"Overall, the experience with the device during the investigational phase and now post-approval has been excellent," he says.

Since WATCHMAN's commercial debut, the MHVI team—composed of interventional cardiologists Drs. Satler, Waksman and Robert Lager, MD, and cardiac electrophysiologists Sarfraz Durrani, MD, and Manish Shah, MD—has implanted the device in eight patients to date. The first six procedures were performed by Drs. Durrani and Shah on longstanding A-fib patients already under their care for arrhythmia.

Just 45 days after the procedure, 92 percent of patients can stop anticoagulation therapy altogether. That figure jumps to 99 percent at 12 months.

Ten years in the making, WATCHMAN consistently demonstrated comparable stroke-risk reduction—and statistically superior reduction in hemorrhagic stroke, disabling stroke and cardiovascular death—compared to warfarin. Despite this impressive performance, however, MHVI specialists caution that WATCHMAN is neither a cure for A-fib nor a replacement for other proven stroke-reduction therapies.

"Deciding who is appropriate for WATCHMAN and who isn't is critical," concludes Dr. Shah, director, Clinical Cardiac Electrophysiology Fellowship Training Program. "All patients with atrial fibrillation should be evaluated by experienced providers to ensure therapy is tailored appropriately for each individual. It's a delicate balancing act between risk and benefit."



Left: A real time X-ray image of the WATCHMAN as it is placed in the left atrial appendage (LAA). Arrow indicates mesh filter.

Right: Left atrial appendage with WATCHMAN implant

"MHVI's early adoption of WATCHMAN reflects our complete commitment to offering patients the most advanced, evidence-based arrhythmia care available," says Dr. Eldadah, who leads the region's largest and most experienced EP group with nine board-certified arrhythmia specialists on board and more to come. "As a key component of our comprehensive atrial fibrillation management program, WATCHMAN gives us yet another advanced tool to manage patients' risk and improve their quality of life."

In a minimally invasive, one-time procedure, WATCHMAN is threaded through a catheter in the groin and then implanted in the heart at the LAA's opening. Essentially a mesh filter, the jellyfish-looking device is available in five different sizes to accommodate varying anatomies. The procedure generally takes less than an hour, is performed under general anesthesia, and requires a one-day post-operative hospital stay. Eventually, heart tissue forms over the device, permanently sealing off the LAA from the circulation.

FIRST WATCHMAN PROCEDURE A SUCCESS

Constance Wiley is a prime example of how WATCHMAN can change lives. First diagnosed with A-fib in 2002, Wiley subsequently had a full-blown ischemic stroke, followed by multiple TIAs. Warfarin was not a long-term solution for the 63-year-old who developed a major GI bleed.

"Without anticoagulants, Constance faced a 5 to 10 percent increased risk of another stroke each passing year," says cardiac electrophysiologist Sarfraz Durrani, MD. "Her medical history made her an ideal candidate for WATCHMAN." In June, Wiley became the first in the area to undergo a WATCHMAN implant. Dr. Durrani was able to stop Wiley's warfarin at her 45-day follow-up. "I was out watering my garden the first day after the procedure," she says.



Integration of Cardiovascular Services Across MedStar Health

Providing excellent cardiovascular care is always a top priority of MedStar Health. Stuart F. Seides, MD, physician executive director, MedStar Heart & Vascular Institute (MHVI), says, "As our hospitals experience rapid growth in patient numbers for many procedures and services, cardiovascular facilities and processes throughout Maryland are expanding as well, with streamlined systems and state-of-the-art updates to technologies. To assist with the administrative management and strategic development of the MHVI, we recently named Catherine Monge chief administrative officer. She will work with all of the MHVI leaders across the system. She has remained close to MHVI since our founding, including continuing to play a major role in the design and construction of our new Heart Hospital."

"My role as chief administrative officer for the Heart & Vascular Institute," says Monge, "is to integrate best practices and share innovations throughout MedStar Health by standardizing protocols, technology and resources for the benefit of all our cardiovascular patients. I look forward to the challenge of making our highly respected Institute even greater."

EFFICIENCIES AT MEDSTAR UNION MEMORIAL

One example of this innovation, says Cheryl Lunnen, vice president, MedStar Heart & Vascular Institute, Baltimore Region, is the creation of a radial lounge at MedStar Union Memorial Hospital. MedStar Union Memorial's cardiac catheterization team now does more than 60 percent of procedures in a novel way: by inserting the catheter via the radial artery in the wrist, instead of through the femoral artery in the groin. This less invasive method is slightly more complicated for physicians but lowers the risk of significant bleeding and provides a much more comfortable experience for patients.

"Instead of having a clinical look with individual bays, the radial lounge will be a large, open space with recliners," Lunnen explains. "It's more relaxing for patients, and easier to navigate for caregivers. Patients go home faster, and their recovery is smoother. Patients who have had both procedures say you can't believe the difference."

Another initiative at MedStar Union Memorial consolidates cardiovascular services. New groups of cardiologists joining the MedStar system have established practices on the third floor of the Johnston Professional Building. Now cardiac rehab, cardiac testing and device services are relocating there as well, so that "anything our cardiac patients need is together on that floor," Lunnen says.

Momina Mastoor, MD, a specialist in cardiovascular disease at MedStar Union Memorial, says, "Our patients can go right from an appointment with their physician to schedule testing, prevention services or cardiac rehab. It's easier for them and means our turnaround time is faster."



ENHANCED TECHNOLOGIES PROVIDE GREATER COMMUNICATIONS, FLEXIBILITY

A MedStar system-wide evolution in cardiovascular services involves restructuring the way electrocardiograms are being read and reported. With new enhanced imaging technology, physicians and technicians can see patients' films and share them among MedStar hospitals. "That's a quality enhancement, but the transformational piece is that now radiologists and physicians can read films from our various facilities, and even off site," Lunnen explains. "This means that if a hospital is having an unusually busy day, a physician or clinician can reach out for help to someone at another site. This flexibility improves workflow and effectiveness for all."

STREAMLINING AT MEDSTAR FRANKLIN SQUARE

Sriram Padmanabhan, MD, a cardiologist based at MedStar Franklin Square Medical Center, says, "What MedStar Health is trying to do with all of its hospitals is work toward a standardized way of reading and reporting cardiac imaging, beginning with EKGs and eventually moving to echoes and other testing."

MedStar Franklin Square also is adopting more streamlined processes, including one to triage low-risk chest pain patients in the ED. The HEART protocol (the acronym stands for History, EKG, Age, Risk Factors and Troponin levels) helps determine patients' risk factors for a heart incident and gives physicians more information to recommend further treatment. The hospital also uses an outpatient diuretic clinic, based in the cancer center,

Catherine Monge, Chief
Administrative Officer, MHVI



for congestive heart failure patients who don't require hospitalization. "Patients can receive their IV Lasix treatments without being admitted," Dr. Padmanabhan says.

RENOVATIONS AT MEDSTAR SOUTHERN MARYLAND

Changes are also underway at MedStar Southern Maryland Hospital Center. Rapidly increasing patient volumes for procedures, including cardiac catheterizations, percutaneous cardiac interventions (PCIs) and interventional vascular procedures are prompting the hospital to upgrade its labs, where the latest equipment in each lab will make it possible for interventional cardiology, interventional radiology and interventional vascular therapy to be performed in any of the rooms. Procedures, such as vascular identification and vessel tracing, as well as matching up vascular images with CT scans for a more complete image, are facilitated by new software and equipment. A state-of-the-art electrophysiology lab for diagnostic testing is also in use.

"The renovated labs are located close together, and all of our staff is crossed trained, allowing us to provide more comprehensive care," says Mun Hong, MD, chief of Cardiology at MedStar Southern Maryland.

Dr. Hong also highlights MedStar Southern Maryland's strong cardiopulmonary rehab program, for patients recovering from cardiac surgery or dealing with CHF and COPD. "It's one of the key services we provide to the community," says Dr. Hong.

Community outreach is an important priority for the hospital's cardiovascular program. "A major goal for us is providing information and education to the community," says Dr. Hong. "We've found that many patients don't seek medical care until they have advanced disease. If we could see them sooner and achieve earlier diagnoses, we could improve outcomes or even prevent disease."

MedStar Southern Maryland is sponsoring town halls and educational symposia with MedStar cardiologists and other specialists, and is reaching out to local civic groups, churches and schools. After cardiovascular service line staff members spoke at one local school, they learned that a student convinced his grandmother to go to the emergency room when she was experiencing symptoms of a heart attack. "The grandmother was taken to the cath lab for a life-saving procedure to open her blocked artery," Dr. Hong says. "She's home now thanks to her young grandson, who learned about heart attacks from our program."

Cheryl Lunnen, VP,
MHVI, Baltimore
Region



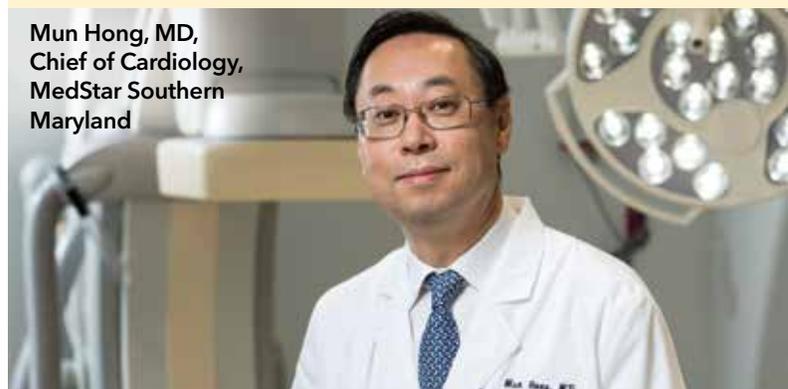
Momina Mastoor, MD,
Cardiovascular Disease,
MedStar Union Memorial



Sriram Padmanabhan, MD,
Cardiologist,
MedStar Franklin Square



Mun Hong, MD,
Chief of Cardiology,
MedStar Southern
Maryland



New Heart Hospital Enters Final Phases of Construction

The first three phases of construction of the new Heart Hospital at MedStar Washington Hospital Center are complete, and the final phase is underway.

Slated for completion in July 2016, the Heart Hospital has been “designed to provide the very best of heart care in the best possible facility,” says Bradley Kappalman, former vice president, MedStar Heart & Vascular Institute (MHVI).

“We’re making sense of space in innovative ways to create an efficient, vertically integrated center for cardiovascular care. It’s truly a hospital within a hospital,” he explains. “Now cardiovascular services at the Hospital Center have a unique identity and cohesive, self-contained geographic space.”

Highlights of the renovations to date:

First floor: A separate entrance and lobby, with special admissions office and ambulatory care offices for cardiologists and surgeons; an expanded first floor Echo Lab and waiting area.

Third floor: Renovation and build-out of cardiac and vascular surgery units; includes rooms for LVAD and heart failure patients and inpatient Echo Lab.

Fourth floor: Renovated cardiology nursing units, with all private rooms; inpatient Echo Lab.

Sixth floor: Administrative offices

PHASE IV: CUTTING EDGE ICUs

The second floor ICU, the final phase of renovation, is the most complex portion of the project.

“This area has required a complete gut of the existing structure,” says Peri DeOrio, MS, RT(R), senior transition manager. She and IT Transition Manager Denise Figueroa are coordinating the massive effort. The second floor will house 34 ICU beds and 10 intermediate care beds.

“The rooms will be large enough for the latest technology and monitoring equipment, as well as space for overnight stays by loved ones,” says Kappalman. “Large windows allow natural light to brighten the space,” he says. “It produces a healing, soothing environment.”

KEEPING THE DOMINOS STANDING

“A project this comprehensive requires the work of hundreds,” says Catherine Monge, chief administrative officer, MHVI, “to move dozens of patients and staff, and sophisticated equipment, without disrupting services.”

“We’ve made it work with careful strategic planning upfront, and communication and coordination on a grand scale,” Monge says. “So many people have made this possible, especially the commitment of Project Lead Chris Poad, whose oversight is a major reason for our success.”

Stuart F. Seides, MD, physician executive director of MHVI, says, “This is the result of the team’s hard work. Cathie, Peri, Brad, Chris and Denise deserve much credit and gratitude. We’ve had some growing pains, but the end is in sight, and I am confident our patients will reap the benefits.”



(L to R) Peri DeOrio, senior transition manager; Denise Figueroa, IT transition manager; Chris Poad, project lead; Cathie Monge, chief administrative officer, MHVI; and Brad Kappalman, former vice president, MHVI, on the first floor during renovation.

MedStar Heart & Vascular Takes the Lead in Global Lipid-Rich Plaque Outcomes Study



Ron Waksman, MD, director of Cardiovascular Research and Advanced Education, is leading an international, multicenter study to determine if the presence of Lipid-Rich Plaques (LRP) can predict a future coronary event.

"We have made good strides in treating cardiac events at the time of the occurrences and understand the characteristics of the vulnerable patient," Dr. Waksman explains. "Yet events still occur in people we traditionally consider at low or moderate risk."

"Our hypothesis is that the detection of LRP is an indicator of a vulnerable plaque with dangerous potential. This study will test this hypothesis and create a natural history cohort, which may ultimately include 9,000 enrollees from across several continents," he says. "Given the current enrollment and event accrual rates, it's possible the answer to this important vulnerable plaque hypothesis may be answered by the end of this year, or early 2016."

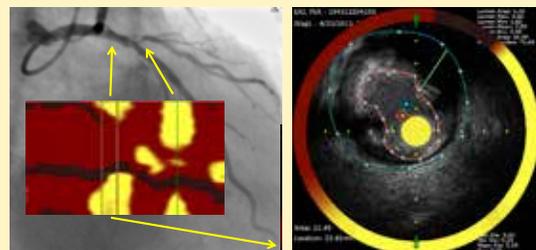
In this study, patients who present with stable angina or acute coronary syndrome with suspected ischemic

heart disease will undergo angiograms to identify any lesions with restricted blood flow. These patients also will undergo imaging with a technology that uses combined intravascular ultrasound (IVUS) with near-infrared spectroscopy (NIRS) catheter [Infraredx; Boston, Mass.] This tool assesses the cholesterol content within the artery walls. The resulting NIRS analysis or chemogram will provide important information about arterial lipid composition.

All patients will receive the standard of care treatment with respect to their angiographic and IVUS findings. The chemogram findings will be blinded to the treating physician. The patients with high lipid core burden index (LCBI) or arterial wall lipid composition will be followed closely for two years to determine if a new coronary event has occurred in the areas of high lipid pools.

A randomly selected half of patients with small or low LCBIs will receive identical follow-up care. Patients who experience a new event will undergo imaging to identify the location of the culprit lesions. These imaging results will be compared to the baseline NIRS chemogram.

If chemograms derived from NIRS prove effective in identifying vulnerable plaque in vulnerable patients, "we will have another important surveillance tool, and may ultimately be able to develop effective interventions—drug and/or devices—to minimize the risk for these patients," Dr. Waksman adds.



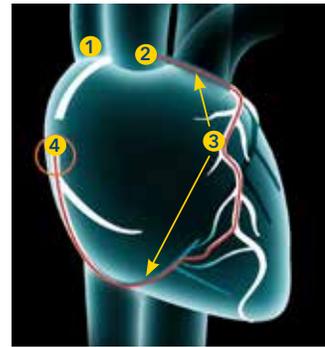
Lipid core in the coronary artery as seen via the NIRS infrared imaging technology

New Tools, Techniques For CTOs

Revascularization of a 24-year-old CTO



(L to R) Nelson Bernardo, MD and Robert Gallino, MD



- (1) Antegrade approach
- (2) Retrograde approach
- (3) Retrograde guide wire
- (4) Breaking through retrograde distal cap

Armed with techniques learned in Asia and new devices created in the U.S., two specialists at MedStar Washington Hospital Center are giving hope to a subset of chronic total occlusion (CTO) patients whose condition was previously considered untreatable. They include ones who are not good candidates for surgery or have failed medical therapy.

“We are restoring quality of life to these patients,” says interventional cardiologist Robert Gallino, MD, who is now doing two of these hybrid percutaneous coronary interventions (PCI) a week with great results.

A recent case, in particular, stands out. Richard Talley, a 70-year-old St. Leonard, Md., man, had coronary artery bypass in 1991 and a mild stroke in 2011. In 2014, he suffered a heart attack. Deepening fatigue meant he had to give up his passion for sailing. “I hated to admit having no energy,” says Talley.

Talley’s cardiologist performed an angiogram and found the bypass had closed. He sent him to Dr. Gallino after diagnosing CTO. Dr. Gallino had traveled to Asia and Europe to learn special CTO techniques. “The Japanese had special wires and micro catheters that we just didn’t have,” Dr. Gallino says.

Success rates are now about 90 percent with the U.S. adaptation of overseas techniques and the new tools that produce shorter, more successful openings of CTOs. Dr. Gallino and Nelson Bernardo, MD, started performing these hybrid CTO PCIs about 18 months ago. Only eight U.S. hospitals are doing more than 50 such heart procedures a year, they say.

Dr. Gallino’s goal was to open Talley’s original blockage. The challenge was twofold: the duration of the CTO—24 years—and the length of the occlusion—approximately 80 mm.

In this procedure, after failing to cross the CTO from the antegrade approach (1), the retrograde approach (2) through the left anterior descending artery (LAD) was used. The septal perforators from the LAD provided the collateral avenue for the passage of a guide wire into the patent distal RCA segment (3). A hydrophilic guide wire was advanced through a support catheter and used to break the distal cap of the CTO (4). An antegrade balloon was placed into the proximal cap in an attempt to create a membrane with the retrograde wire. This wire was advanced, retrograde, up the total occlusion into the guiding catheter engaged at the ostium of the RCA. The support catheter was then advanced into the guiding catheter establishing access. This allowed the advancement of a 350-cm guide wire from the left coronary guide through the occlusion and into the RCA guiding catheter. The exteriorized guide wire was then used for antegrade advancement of balloon catheters and coronary stents for definitive treatment of the RCA CTO.

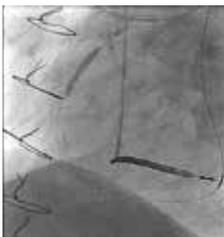
“The technique provides an additional opportunity for patients who would otherwise be relegated to medical therapy,” says Dr. Bernardo.

“Some of these patients, like Mr. Talley, talk about how miserable they were before and how great they feel now,” says Dr. Gallino. Talley agrees. “I went from a small six-cylinder to a big V-8 engine! I felt better almost immediately and haven’t stopped since.”

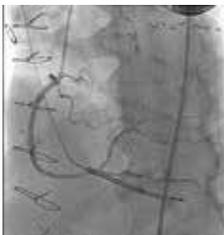
Top: Right coronary artery before with a chronic total occlusion (CTO) soon after its origin



Middle: Stent inflated in the right coronary artery



Bottom: Right coronary artery after CTO percutaneous coronary intervention (PCI)



Cardiac and Vascular Surgeons Team Up to Repair Rare Throat Disorder

"I thought I was going to die in front of the kids."

Instrumental music teacher Marilyn Beeson had just finished a class with 35 elementary school children preparing for their spring concert. As she drank some Gatorade, she felt her throat completely close up.

"I couldn't breathe," she says. During the past five years, Mrs. Beeson had had sporadic difficulty swallowing, but her symptoms on May 14 were the worst she had ever experienced.

Another adult in her classroom performed the Heimlich maneuver while a student ran to get the school nurse. "I could breathe a little by then," she recalls, "but then my throat closed again—a terrifying feeling."

A CT at Calvert Memorial Hospital revealed an aberrant right subclavian artery at the last branch of the aortic arch. The vessel was compressing her esophagus, resulting in a swallowing disorder, dysphagia lusoria. Mrs. Beeson was brought to MedStar Washington Hospital Center, where vascular surgeon Rajesh Malik, MD, and cardiac surgeon Christian Shults, MD, took over her care.

Aberrant right subclavian artery is the most common embryologic abnormality of the aortic arch, but affects fewer than one percent of the population.

"It's uncommon to see dysphagia lusoria, and Mrs. Beeson's case was unusual, because most people with an aberrant artery are asymptomatic, or the condition is associated with an aneurysm of the vessel or the adjoining aorta," explains Dr. Malik.

"Treating this condition requires a multidisciplinary approach," adds Dr. Shults. "And being at the Hospital Center means being able to collaborate when presented with an unusual problem."

"Many cases are treated endovascularly," Dr. Malik says. "But because Mrs. Beeson had been very uncomfortable for some time, we felt an open approach was the better option. She is young and healthy, and this way, the artery would be resected entirely."

The physicians recommended the open procedure. "I felt I could trust Dr. Malik's and Dr. Shults' opinions and expertise," says Mrs. Beeson. "They agreed I would recover well and shouldn't ever have to deal with this situation again."

The surgeons performed a two-stage procedure: a right carotid subclavian bypass by Dr. Malik, and a few days later, a resection of the aberrant right subclavian artery via right posterolateral thoracotomy by both physicians.

As she recovered, Mrs. Beeson felt the difference immediately. "I no longer felt any kind of rubbing sensation in my throat," she says.

"The problem with Mrs. Beeson's artery is completely resolved," Dr. Shults says. Dr. Malik adds, "It's great to be able to help her feel more comfortable, and allow her to eat without worry or fear."

"Treating this condition requires a multidisciplinary approach. And being at the Hospital Center means being able to collaborate when presented with an unusual problem."

—Christian Shults, MD



Rajesh Malik, MD (L) and Christian Shults, MD (R) with dysphagia lusoria patient Marilyn Beeson

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Visit our website, at medstarheartinstitute.org.

U.S. News & World Report lists MedStar Washington Hospital Center as the only hospital with a nationally ranked Cardiology & Heart Surgery program in the Washington, D.C., region.

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MedStar Heart & Vascular Institute

DEPARTMENT OF CONTINUING MEDICAL EDUCATION & QUALITY TRAINING

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UPCOMING CME CONFERENCES

**CONTEMPORARY MANAGEMENT
OF VASCULAR DISEASE**
Friday, October 30
Provided by the Cleveland Clinic Heart
& Vascular Institute and MedStar Heart &
Vascular Institute
Baltimore Hilton Hotel, Baltimore, Md.
Course Directors—Paul J. Corso Jr., MD,
Lars G. Svensson, MD, PhD and
Ron Waksman, MD

**UPDATE ON THE TREATMENT OF
HEART & VASCULAR DISEASE**
Saturday, November 21
Provided by the MedStar Heart &
Vascular Institute
Gaylord National Harbor, Oxon Hill, Md.
Course Directors—Mun K. Hong, MD and
Frederick P. Beavers, MD, FACS

REGULARLY SCHEDULED SERIES—AMA PRA Category 1 Credit(s)TM

CARDIOLOGY/CARDIOVASCULAR

Cardiac Catheterization Conference
Weekly, Wednesdays, 7:30 a.m.
CTEC Conference Theater
1 AMA PRA Category 1 CreditTM
202-877-7808

Cardiac Surgery Grand Rounds
Weekly, Tuesdays, 7:15 a.m.
CTEC Conference Theater
2 AMA PRA Category 1 CreditsTM
202-877-3510

Cardiology Grand Rounds
Weekly, Tuesdays, 12:30 p.m.

CTEC Conference Theater
1 AMA PRA Category 1 CreditTM
202-877-9090

Echocardiography Conference
Weekly, Thursdays, 7:45 a.m.
CTEC Conference Theater
1.25 AMA PRA Category 1 CreditsTM
202-877-6264

Electrophysiology Core Curriculum Conference
Weekly, Tuesdays, 7 a.m.
First, second and third Tuesdays: Room 5B3
Fourth Tuesdays: CTEC Conference Theater
1 AMA PRA Category 1 CreditTM
202-877-3951