Infiltrative Cardiomyopathy Program

Earlier Diagnosis and Treatment

Farooq Sheikh, MD, Director of MedStar Heart & Vascular Institute’s Infiltrative Cardiomyopathy Program
Drilling Down, Branching Out

In the not-too-distant past, a well-trained cardiologist could handle most patient diagnoses and treatment, and have a fairly complete understanding of the field. But the knowledge base has expanded exponentially in the last few decades, exceeding the absorption capacity of any one (even brilliant!) cardiologist.

The growth of the field has been organic, rooted in a strong core of information—the trunk from which branches and leaves have sprouted at an astonishing pace. Sub-specialties and sub-sub-specialties have emerged and cardiology practice—as well as cardiac surgical practice—continues to be reshaped for the benefit of patients. The generalist, often acting as the “quarterback” in an increasingly complex system of care, must have a broad understanding of the field along with its growing sub-specialties and, critically, must have ready access to the necessary advanced expertise.

This sub-specialty expertise is the result of the research enterprise: It’s the engine that fuels knowledge expansion. From the not-too-distant past, a well-trained cardiologist could handle most patient diagnoses and treatment, and have a fairly complete understanding of the field. But the knowledge base has expanded exponentially in the last few decades, exceeding the absorption capacity of any one (even brilliant!) cardiologist. The growth of the field has been organic, rooted in a strong core of information—the trunk from which branches and leaves have sprouted at an astonishing pace. Sub-specialties and sub-sub-specialties have emerged and cardiology practice—as well as cardiac surgical practice—continues to be reshaped for the benefit of patients. The generalist, often acting as the “quarterback” in an increasingly complex system of care, must have a broad understanding of the field along with its growing sub-specialties and, critically, must have ready access to the necessary advanced expertise.

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COMMUNICATION, DISSEMINATION

Perhaps nothing more dramatically demonstrates the growth of research and the increasing specialization of cardiovascular medicine than our annual Cardiovascular Research Technologies (CRT) conference. This year’s conference celebrated 40 years of percutaneous treatment options for heart disease. The CRT meeting has become one of the world’s largest conferences of its kind, attracting 100,000 times each day, and not all of those heartbeats are helpful to a patient or doctor. “It can be difficult for doctors to know what to do with all of the information,” says Dr. Raman. “The challenge is how the data can be analyzed, curated and delivered to the healthcare team in actionable form and within a manageable workflow.”

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Venkatesh Raman, MD

The early results are very promising.

AFib is only one health target Fitbit and other companies are exploring. Trackers and smart phones might monitor other cardiac, pulmonary and endocrine conditions. For example, and already available, continuous glucose monitoring systems for diabetes could send data to a patient’s smart phone and relay that information to the provider team. This kind of active technological engagement can minimize office visits and lab tests, shortening potential delays in treatment to make useful changes easier and faster for the patient.

One of the biggest challenges is the deluge of data our devices generate. The human heart can beat well more than 100,000 times each day, and not all of those heartbeats are helpful to a patient or doctor. “It can be difficult for doctors to know what to do with all of the information,” says Dr. Raman. “The challenge is how the data can be analyzed, curated and delivered to the healthcare team in actionable form and within a manageable workflow.”

Rising to that challenge is what will turn these personal wellness gadgets into true digital health tools.
New MHVI Program Improves Diagnosis and Management

Infiltrative Cardiomyopathies

S
cialists at MedStar Heart & Vascular Institute (MHVI) have launched a new program to help diagnose and treat infiltrative cardiomyopathies earlier, in hopes of giving patients a greater chance for a longer, and improved, quality of life.

Infiltrative cardiomyopathies (CM) represent a group of acquired and inherited diseases characterized by the deposition of abnormal biological substances within the heart that ultimately lead to cardiac dysfunction. These diseases result in symptoms of heart failure (breathlessness, lower extremity swelling, exercise intolerance, fatigue) as well as symptoms related to heart failure, including heart failure, electrical conduction disease, ventricular tachycardia, and even death.

While some patients have silent or asymptomatic disease, which has previously realized. In fact, the first international guidelines for the diagnosis and treatment of CM were only released in 2014.

“The annual incidence of sarcoidosis in the United States is estimated at 10 to 40 per 100,000 individuals, with a three-fold higher risk in African-Americans,” explains Dr. Sheikh.

“Approximately 30 percent of all sarcoidosis patients will experience cardiac involvement; however, clinically overt cardiac disease may only manifest in approximately 5 percent of cases. That means that the majority of CS patients have silent or asymptomatic disease, which has traditionally led to late or absent diagnoses and treatment.”

Over the last few years, however, cardiac MRI (CMR) and cardiac Positron Emission Tomography (PET) have emerged as the most effective and reliable imaging modalities for detecting CS. Cardiac PET imaging has also been shown to be useful in assessing the CS patient’s response to immunosuppressive therapy.

“On their own, neither ECGs nor echocardiograms are specific enough to pick up the presence of cardiac sarcoidosis,” says Dr. Sheikh. “Even endomyocardial biopsy has a detection rate of less than 25 percent. By contrast, CMR and PET imaging have proven to be much more sensitive in detecting CS. These tests also serve as diagnostic tools, predicting which patient is most likely to develop adverse cardiac events in the future, including heart failure, electrical conduction disease, ventilator tachycardia, and even death.”

While steroids remain the cornerstone immunosuppressive treatment, newer immunosuppressive therapies have been evaluated as steroid-sparing treatments, including biologic agents targeting TNF-alpha (Tumor Necrosis Factor). For patients with Stages B to D heart failure, medical management remains an essential treatment approach. Finally, advanced CS care includes implantable cardiac defibrillators, monitoring for conduction disease and, in the most severe cases, mechanical circulatory support such as left ventricular assist device (LVAD) therapy and cardiac transplantation.

CARDIAC AMYLOIDOSIS

Amyloidosis is a systemic disease in which abnormal and even seemingly normal proteins deposit in organs and tissues, disrupting their function. Once considered rare, cardiac amyloidosis (CA) is now recognized as an under-recognized cause of heart failure. Just like cardiac sarcoidosis, the diagnosis of cardiac amyloidosis requires biopsy evidence of deposits in the heart.

Two forms of amyloid generally infiltrate the heart: AL (immunoglobulin light chain, previously known as primary amyloidosis) and transthyretin (ATTR). Transthyretin (ATTR) amyloidosis further encompasses two distinct disease states: hereditary and familial amyloidosis (ATTR mutation), which is due to a mutation in the transthyretin gene, and a non-genetic form seen in elderly individuals (ATTR-wild type, formerly known as senile systemic amyloidosis).

The incidence of AL cardiac amyloidosis remains relatively stable at around 3,000 new cases per year. However, recent data demonstrates that transthyretin (CA) is a frequent yet largely unnoticed cause of several cardiovascular diseases, including heart failure with preserved ejection fraction (HFrEF), atrial fibrillation, and aortic stenosis. It is particularly more widespread than previously expected among those individuals older than 70 and African Americans.

The past decade has seen a revolution in the diagnostic and treatment strategies for cardiac amyloidosis. The MHVI Infiltrative Cardiomyopathy Program has adopted a systematic approach to evaluate patients with suspected CA, which harnesses state-of-the-art tools for the diagnosis and treatment of the disease. This has included involvement in the Patisiran EAP Study, a phase 3 clinical trial assessing the ability of RNA interference in the treatment of hereditary amyloidosis.

OUTLOOK FOR THE FUTURE

Through the MHVI Infiltrative Cardiomyopathy Program, Drs. Sheikh and Mohammed anticipate developing a nationally recognized center of excellence on both the clinical and research fronts that hopefully will yield new knowledge that can lead to disease-specific therapies for infiltrative CM patients. Meanwhile, they are focused on capturing more patients with suspected infiltrative heart disease early in the process when treatments can help manage disease progression. Dr. Sheikh will begin to see patients at our MedStar Union Memorial Hospital site this fall, as part of our continuing effort to expand access to the MHVI network.

“Infiltrative cardiomyopathies and related heart diseases are a group of conditions in which the heart is basically an innocent bystander, struck down by an out-of-control systemic illness,” Dr. Sheikh says. “Throughout the MHVI network, we have the full complement of tools, technologies, and talent at our fingertips to identify infiltrative cardiomyopathies, assess the threat, and intervene accordingly, giving patients their best hope for enhanced longevity and an improved quality of life.”

For more information on the Infiltrative Cardiomyopathy Program, please call Farooq Sheikh, MD, FACC, or Selma Mohammed, MD, PhD, at 202-877-8085. To schedule an appointment at MedStar Washington Hospital Center, call 202-877-4698. At MedStar Union Memorial Hospital, call 410-554-6550.
Despite dramatic improvement in outcomes over the past decade, the percentage of Chronic Total Occlusions (CTOs) treated by percutaneous coronary intervention over the past decade, the percentage of Chronic Total Occlusions (CTOs) treated by percutaneous coronary intervention (PCI) remains stubbornly low nationwide, at about 5 percent. But Nelson Bernardo, MD, and Robert Gallino, MD, both experienced masters of the intricate procedures, say that the numbers are a fairly frequent occurrence. In fact, out of every 100 patients undergoing non-urgent coronary angiography, around 20 will be diagnosed with CTOs.

Unfortunately, many cardiologists still believe CTOs cannot be opened, or that opening the CTO will not lead to a significant clinical improvement,” says Dr. Gallino. “Yet our personal experience, particularly with PCI, continues to illustrate the benefits of opening CTOs, even those that have been closed for 10 years or longer.”

Recent studies corroborate their observations. One clinical trial demonstrated that using PCI to open totally blocked coronary arteries can offer symptomatic relief for patients with angina, helping them feel better (https://www.tctmd.com/news/euroco-vascularization-bests-medical-therapy-quality-life-cto-lesions). Two other clinical trials also showed a marked improvement in the quality of life for patients post-CTO PCI related to relief of lifestyle-limiting fatigue and shortness of breath (Am J Cardiol. 2013;111(4):521-5 and J Am Coll Cardiol. 2014;63(2):235-43). A successful PCI depends upon thorough evaluation and pre-planning to examine each potential candidate’s individual coronary anatomy and morphology. Factors include lesion length, the size and location of the distal target vessel, the existence of significant bifurcation, and the anomalies of the collateral vessels, including size and tortuosity. The specialist then devises the best strategy for achieving complete revascularization using the antegrade or retrograde approach, along with a series of back-up plans to address unforeseen difficulties that may arise.

Once the plan is in place, the procedure gets underway. While CTO PCI is more difficult for physicians—the American College of Cardiology still called it “highly challenging” as recently as 2015—it is fairly straightforward for patients. “After we perform CTO PCI, the patient is usually able to go home the next day and can resume regular activities a few days later,” says Dr. Gallino. “By contrast, patients who have had open heart surgery typically spend between seven and 10 days in the hospital, followed by six weeks of recovery.”

CTO PCI is still relatively new, but Drs. Bernardo and Gallino believe the outlook for the procedure is promising. “In those cases where only one artery is totally occluded, we already know it’s simply not worth the risk to perform open heart surgery when a minimally invasive PCI may be able to fix the problem,” Dr. Bernardo says. “Theoretically, PCI can help the patient live longer, as well, by potentially avoiding a myocardial infection or contributing to an improved left ventricular function. If ongoing and future studies continue to show significant positive impact on health and mortality, PCI could clearly change the treatment arc for coronary CTOs in the future.” Until that day, both doctors are happy with what PCI can offer patients now. “The improvement in the patient’s lifestyle is the most rewarding aspect of why we do the procedure,” concludes Dr. Gallino.

As leading specialists in percutaneous coronary intervention for CTOs, Drs. Nelson Bernardo and Robert Gallino are sharing their knowledge and experience with select cardiac interventionalists to raise awareness of the procedure and train operators. They have been working since 2014 to develop an animal model to represent the condition and its vagaries. Using a pig model to replicate CTO in a human, they offered their first day-long course earlier this year to train practitioners in the art and skill of crossing CTOs.

“We want to provide a venue for interventional cardiologists to hone their expertise in CTO PCI,” explains Dr. Bernardo. “This model could also serve as a testing platform for guidewires and devices developed to cross CTOs as well as for evaluating different therapeutic options.”

To schedule a consultation with Drs. Bernardo or Gallino, call 202-877-5975.
Sports and Performance Cardiologist Ankit Shah, MD, Joins MedStar Union Memorial Hospital

MedStar Heart & Vascular Institute is pleased to announce the addition of Ankit B. Shah, MD, MPH, FACC, as director of the newly created MedStar Sports & Performance Cardiology Program at MedStar Union Memorial Hospital. Sports cardiology is an emerging subspecialty of cardiology that fills a previously undetected void in athletes’ care, both recreational and professional, and active individuals with cardiovascular disease or symptoms.

A graduate of Tufts University School of Medicine, Dr. Shah completed his internal medicine training at Cedars-Sinai Medical Center in Los Angeles and cardiovascular disease training at Lenox Hill Hospital in New York City before completing a dedicated fellowship in sports cardiology at Massachusetts General Hospital—the only fellowship of its kind in the country. During his fellowship at Massachusetts General Hospital, Dr. Shah participated in the cardiovascular care of the Boston Bruins, New England Patriots and Harvard University athletes. Since arriving in Baltimore in September of 2017, he has worked closely with MedStar Sports Medicine to provide cardiovascular care for local collegiate and professional athletes. He is also collaborating with Sports Medicine researchers to evaluate best methods for cardiac screening in athletes and the cardiovascular impact of long-term endurance exercise.

“We treat athletic individuals of all ages and athletic aspirations,” says Dr. Shah. “We offer customized treatment plans and exercise prescriptions to allow patients to safely continue in their athletic endeavors. We work with our patients to try to get them back to their sport or activity of choice. Our ultimate goal is keeping our patients safe and active.”

According to Dr. Shah, evaluation of symptoms is done in the context of the individual’s age, risk factors and sport with the aim of reproducing symptoms through tailored exercise testing or ambulatory monitoring. All exercise testing is performed to maximal volitional effort, and cardiopulmonary exercise testing is used to perform complex exercise testing. This diagnostic tool helps clinicians distinguish the cause of exercise intolerance or dyspnea.

“It’s important to recognize that athletes or active individuals may not present the same way as their sedentary counterparts,” notes Dr. Shah. “Active individuals may only experience symptoms or limitations at peak exercise, they may be more reluctant to voice concerns, and symptoms may be subtle, such as an inability to maintain prior race paces.”

Likewise, he adds, interpretation of ECGs and cardiac imaging in athletes must be carefully considered, noting that what may look different or abnormal in a non-athlete might not be a concern in the athletic individual. Medications also play an important role and a careful review and customization of prescribed medications can have a significant impact on regaining or preserving athletic endurance.

For more information on MedStar Sports & Performance Cardiology at MedStar Heart & Vascular Institute or to make an appointment with Ankit Shah, MD, please call 410-366-5600.

MEDSTAR SPORTS & PERFORMANCE CARDIOLOGY provides comprehensive cardiovascular care and evaluation for athletes and active individuals of all ages and levels, including:
• Sports eligibility through pre-participation cardiac evaluation
• Evaluation of potential cardiac symptoms
• Return-to-play recommendations after cardiac procedures or diagnoses
• Differentiating between “athlete’s heart” and cardiovascular disease
• Recommendations for performance improvement
• Preventive cardiac care and evaluation of healthy individuals

MedStar Heart & Vascular Institute | Spring 2018
MedStarHeartInstitute.org
Toby Rogers, MD, PhD, prevents one of the most feared, developed in part by MedStar Heart & Vascular Institute’s displacement of the old valve’s leaflets. “They may want to have TAVR, but we have found TAVR is a lower-risk alternative. But as a community we to replace a failing valve is usually much higher risk for leaky over time,” explains Dr. Rogers. “A second surgery to replace a failing valve is usually much higher risk for patients than their original surgery. For many patients, TAVR is a lower-risk alternative. But as a community we have learned the hard way that in some patients, displacing the leaflets of the original valve to make room for the new valve can block off a coronary artery,” he says. “As younger and younger patients receive bioprosthetic rather than mechanical surgical valves, and with bioprosthetic valves expected to last 10 to 15 years, many patients in the future will require a re-do procedure,” Dr. Rogers explains. “They may want to have TAVR, but we have found that a small but significant minority are at high risk of coronary artery obstruction due to the type of surgical valve they have, and their own anatomy.” “We know from large registries that if coronary artery occlusion occurs, more than 50 percent of these patients will die. With BASILICA, we now have a reliable percutaneous treatment option to offer,” he says. Before the development of BASILICA, the only alternative for these patients was deploying a stent in the ostium of the threatened artery to hold the leaflet away as the TAVR valve was deployed. “But this was a short-term solution with a number of complications,” Dr. Rogers adds.

Dr. Rogers was part of the team at the National Heart, Lung and Blood Institute (NHLBI) that conducted the animal research leading to the BASILICA procedure. The first-in-man BASILICA procedure was performed at the University of Washington in the summer of 2017 with Dr. Rogers in attendance. To date, more than 25 BASILICA procedures have been performed worldwide.

CRITICAL CLINICAL TRIAL AT MHVI
Late last year, Dr. Rogers performed the BASILICA procedure on a patient at Medstar Washington Hospital Center with excellent results. “The patient we treated was very sick with a failing surgical bioprosthetic aortic valve that was leaking severely and causing heart failure,” Dr. Rogers says. “Another surgery was not an option as she was just too unwell. Her CT scan showed that she was at risk of coronary artery obstruction. We performed the BASILICA procedure, which was a success, and the patient was discharged just a few days later.”

“We believe we can predict fairly well through multimodality imaging who is at risk for this potentially fatal complication,” he says. “But we would like to gather additional data from a larger patient population. This is why we initiated the BASILICA clinical trial, an FDA-approved Early Feasibility Study sponsored by the NHLBI. The Hospital Center is one of just five medical centers in the U.S. participating.”

“The BASILICA procedure is part of a family of transcatheter electro-surgery techniques we developed at NHLBI,” Dr. Rogers says. “These techniques are being applied to other structural heart interventions, including as a way to prevent left ventricular outflow tract obstruction during transcatheter mitral valve replacement, and for transcaval access in patients ineligible for transfemoral access by TAVR due to peripheral artery disease. Our objective is to develop solutions for patients unable to have standard treatments due to their complex anatomy and comorbidities.”

New Technique Expands Life Saving Use of TAVR

BIOPROSTHETIC AORTIC SCALLOP INTENTIONAL LACERATION TO PREVENT IATROGENIC CORONARY ARTERY OBSTRUCTION

A n innovative catheter technique is helping to trans-form treatment for patients whose bioprosthetic aortic valve is failing. The BASILICA procedure, developed in part by MedStar Heart & Vascular Institute’s Toby Rogers, MD, PhD, prevents one of the most feared, and often fatal, complications of valve-in-valve TAVR— coronary artery obstruction caused by mechanical displacement of the old valve’s leaflets.

BASILICA (Bioprosthetic Aortic Scallop Intentional Laceration to prevent Iatrogenic Coronary Artery Obstruction) employs an electrified guide wire threaded through a catheter to slice the leaflet of the patient’s failing bio-prosthetic valve. Cutting the leaflet before TAVR allows blood to flow into the coronary artery through the split leaflet when the new valve is deployed.

DECREASING RISK OF A FATAL COMPLICATION
“Surgical tissue heart valves can become narrowed and leaky over time,” explains Dr. Rogers. “A second surgery to replace a failing valve is usually much higher risk for patients than their original surgery. For many patients, TAVR is a lower-risk alternative. But as a community we have learned the hard way that in some patients, displacing the leaflets of the original valve to make room for the new valve can block off a coronary artery,” he says.

As younger and younger patients receive bioprosthetic rather than mechanical surgical valves, and with bioprosthetic valves expected to last 10 to 15 years, many patients in the future will require a re-do procedure,” Dr. Rogers explains. “They may want to have TAVR, but we have found that a small but significant minority are at high risk of coronary artery obstruction due to the type of surgical valve they have, and their own anatomy.” “We know from large registries that if coronary artery occlusion occurs, more than 50 percent of these patients will die. With BASILICA, we now have a reliable percutaneous treatment option to offer,” he says. Before the development of BASILICA, the only alternative for these patients was deploying a stent in the ostium of the threatened artery to hold the leaflet away as the TAVR valve was deployed. “But this was a short-term solution with a number of complications,” Dr. Rogers adds.

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Early Feasibility Study FIRST-IN-MAN TRANSCAVAL TAVR PROCEDURE USING NEW CLOSURE DEVICE
Transcaval access has become the preferred alternate access approach at Medstar Washington Hospital Center for patients who are ineligible for transfemoral TAVR due to small or diseased iliofemoral arteries. Until now, closure of the transcaval access was performed using cardiac occluder devices that were not designed for this purpose. The Hospital Center is participating in the first FDA-approved Early Feasibility Study (EFS) of a new dedicated closure device for transcaval TAVR, sponsored by the National Heart, Lung and Blood Institute. Toby Rogers, MD, performed the first-in-man transcaval TAVR procedure using this new device in February 2018. The hospital has enrolled seven patients into the study thus far, and early results have been very promising. The full results of the EFS will be presented later this year.
Answers in the Palm of Your Hand

How Handheld Ultrasound Is Changing Clinical Cardiology

The patient had a history of heart failure, and came to the clinic complaining of a see-sawing heart rate. There was no possibility of getting an immediate echocardiogram to help with diagnosis.

So Barbara Srichai, MD, a cardiologist at MedStar Georgetown University Hospital, used the new handheld ultrasound device that was in trial at the Heart Clinic. “I saw that the issue was not that bad, and was able to pursue a therapeutic course that otherwise I might have had to wait several days to prescribe,” she recalls.

Welcome to the new world of outpatient cardiac care, where the portability and miniaturization of diagnostic technology is transforming the patient care experience.

“Slowly, all the devices are getting smaller and smaller,” says Dr. Srichai. “Echocardiographic devices are now more like laptop-type machines. These handheld devices, which have dual-sided transducers that optimize images of the heart, bring ultrasound down to something you can put into your pocket. It becomes an adjunct to the physical exam, allowing the clinician to refine the diagnosis and provide the patient more immediate feedback without having to schedule a separate appointment.”

Both Dr. Srichai and her colleague, Carolina Valdiviezo, MD, note the devices at this point do not replace the detail of an echocardiogram. “This is for big issues,” says Dr. Valdiviezo. “You can tell if heart function is normal or abnormal, if the valve is thickened. If someone in the cancer population has fluid around the heart. You can get an idea of stenosis, but you can’t tell if it’s moderate or severe. So in many cases you will still require a full cardiac study.”

The handheld ultrasound devices went into use at the hospital this spring, and Drs. Srichai and Valdiviezo will be studying the efficacy of the device as they begin to implement it in the cardiac clinic. “Is it difficult to train clinicians to use this?” asks Dr. Srichai. “We’ll look at cardiologists and internists who have no echocardiographic capture experience—if you can’t capture the pictures, or if you don’t know what you’re looking at, then this may not be that useful in their exam.”

While the technology is still prohibitively expensive for widespread use in community clinics, Dr. Valdiviezo says many physicians are interested in the potential of handheld ultrasound. “We’ve been reading about this in the literature for years,” she notes. “It could be used to provide access in remote locations. It has the potential to reduce costs. Patients certainly appreciate not having to return for a separate appointment and reduced uncertainty. This is just the beginning, but it’s a very exciting place to be.”

New Version of CodeHeart Debuts

In 2011, MedStar Washington Hospital Center unveiled CodeHeart, a secure mobile app, which provided a real-time video stream for Emergency Departments to discuss ECGs with interventional cardiologists in the hospital’s Cath Lab. The app, conceptualized by Lowell F. Satler, MD, director of Cardiac Catheterization Laboratory at MedStar Washington Hospital Center in partnership with Vigilant Medical, proved to be a vast improvement over faxing ECGs, which could be missed.

Cardiovascular Revascularization Medicine, a study published in 2015, found that the application allowed heart attack patients to be treated more quickly—some an average of 30 percent faster—reducing potential heart damage.

This spring, the third iteration of CodeHeart is making its way into area EDs, allowing for secure texting of ECGs.

“We’ve used the CodeHeart app successfully for years,” says Eileen Searson, manager, Transformational Technology. “Texting is the preferred method of communication, and cell phone cameras are so good now that you can zoom in, manipulate the images, and send multiple ECGs, for comparison.”

“This is how it works,” she says. “You open the application and take the picture within the app. The picture resides in the secure app and not on your phone. It’s easy to use!”

“"When it comes to treating a patient who appears to be suffering from chest pain or other heart attack symptoms, every second counts. CodeHeart helps us provide optimal care as quickly as possible and effectively treat every heart patient who comes to our facility. As the technology continues to advance, we are able to save more lives and achieve faster treatment times than we could have imagined five or ten years ago.”

—Lowell F. Satler, MD
A Minimally Invasive Approach to Treating Carotid Artery Stenosis
Transcarotid Artery Revascularization (TCAR)

Diagnosis
• A CT scan confirmed that the patient was a good candidate for the TCAR stent procedure.
• The patient was advised of the procedure’s benefits and risks, and gave his consent.

Treatment
• The TCAR was performed during a short procedure under general anesthetic through a 2 cm incision above the patient’s clavicle.
• No problems or unexpected conditions were encountered.

Outcome
• The patient was discharged the day after surgery.
• A follow-up scan verified that the stent is performing as expected, with no recurrence of stenosis.
• The patient will continue to undergo routine monitoring.

Conclusion
Transcarotid Artery Revascularization (TCAR) is an attractive option for treating carotid artery stenosis in patients instead of carotid endarterectomy or the transfemoral approach.

About Dr. Vallabhaneni
Dr. Vallabhaneni is the director of Vascular Surgery-Baltimore Region for the MedStar Heart & Vascular Institute. Fellowship-trained in vascular surgery, he is experienced in all forms of minimally invasive and open vascular surgery techniques, and is well versed in the medical management of vascular issues. Dr. Vallabhaneni is one of a few physicians in Maryland certified with expertise to perform the TCAR procedure.

“By combining surgical principles of neuroprotection with minimally invasive endovascular techniques,” says Dr. Vallabhaneni, “Transcarotid Artery Revascularization (TCAR) offers tremendous potential for the treatment of carotid artery stenosis as an alternative to conventional carotid endarterectomy and stenting procedures. Indeed, it has the potential to become the primary therapy for carotid artery stenosis, a trend that will benefit both patients and surgeons.”

Individuals with all forms of carotid artery stenosis may benefit from minimally invasive treatment options such as TCAR. If you would like to discuss a patient, Dr. Vallabhaneni may be reached at 412-215-7123. Or, call 410-554-2950 to refer a patient.

To learn more, visit MedStarHeartInstitute.org.

Record Numbers Attend CRT 2018
Latest Research in Structural Abnormalities Highlighted

More than 3,000 people gathered in Washington, D.C, for the 21st annual Cardiovascular Research Technology (CRT) meeting in early March. The conference once again featured a diverse, boutique-style curriculum with live-case presentations, breaking research trial results, and a trio of keynote speakers that attracted large, appreciative audiences.

KEYNOTERS: MOTIVATIONAL, THOUGHTFUL AND COMPELLING
Former President Barack Obama topped the list of popular keynoters, drawing a crowd that exceeded the capacity of the hotel, and was moved to the DAR Constitution Hall. The lively discussion between the former president and Ron Waksman, MD, CRT course chairman and director of MedStar Heart Cardiovascular Research, was a freewheeling, amusing, thoughtful conversation that drew applause and hoots from the audience.

Keynoter Dolvett Quince of The Biggest Loser fame talked about the importance of consistency in adopting a healthy lifestyle and urged cardiologists to practice what they preach.

Donna Edwards, former U.S. representative from Maryland, discussed the continued disparities that exist in health care, drawing on her own experiences and those of the predominantly African-American county she represented in Congress.

AN EMPHASIS ON WOMEN
Among the most popular presentations was the first-ever, all-women live case. The case, directed by Annapoorna S. Kini, MD, director of the cardiac catheterization lab at Mount Sinai Hospital in New York City, was a “milestone that would help change the future participation of female cardiologists in live-case presentations and in the field,” Dr. Waksman noted.

LATEST TRIAL RESULTS
• The meeting highlighted the latest research in the growing use of interventional techniques for treatment of structural abnormalities. Dr. Waksman presented an interim analysis of the Low-Risk TAVR multicenter research trial, which shows positive results for using transcatheter aortic valve replacement (TAVR) with commercially available valves in low-surgical-risk patients with symptomatic severe aortic stenosis. Currently, TAVR is reserved for both high and intermediate surgical-risk patients.

• Preliminary results from the ongoing LIBERTY 360 study show the use of endovascular device interventions in patients with symptomatic lower-extremity peripheral artery disease continues to show freedom from major adverse events and improvements in quality of life.

• In a first-in-man study, the sirolimus-coated balloon was safe and feasible.

• Use of radial access in patients with acute coronary syndrome undergoing invasive management is associated with lower risk of death, myocardial infarction or major bleeding at 180 days compared with femoral access.

• Another study indicates using paclitaxel-coated balloons in treating de novo lesions in small coronary vessels is as safe and effective as zotarolimus-eluting stents.

RECOGNIZING INNOVATION IN INTERVENTIONAL CARDIOLOGY TECHNOLOGY
Philippe Genereux, MD, co-director of the Structural Heart Program at Morristown Medical Center in New Jersey, was awarded first place for his presentation, “A Novel Transcatheter MR Treatment Technology.” Dr. Genereux was also awarded second place for the Saranas™ Early Bird Bleed Monitoring System.

Third place went to Ronald J. Shebuski, PhD, president and CEO of Symmetry Pharmaceuticals, who introduced a localized sirolimus delivery system for vascular grafts.
Cardiovascular Physician is a publication of MedStar Heart & Vascular Institute. It is a forum to share clinical, research and teaching information in cardiology, cardiac surgery and vascular care.

Please submit editorial comments to Norma Babington, at norma.babington@medstar.net, or 202-877-0201.

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