Aurora specialists study alternative approach to prevent stroke in subjects with atrial fibrillation

Atrial fibrillation affects about 2.3 million people in the U.S. The risk for stroke is five times greater in people with atrial fibrillation than in the general population. Aurora Health Care is studying the WATCHMAN® device for prevention of stroke in eligible subjects.

Electrophysiologist Jasbir Sra, MD, and interventional cardiologist Tanvir Bajwa, MD, lead the multidisciplinary team that uses the investigational device in a clinical trial to test its efficacy at Aurora St. Luke’s Medical Center, Milwaukee.

The WATCHMAN device is a stroke prevention alternative to anticoagulation therapy for subjects with atrial fibrillation who have had a stroke or are at greater risk for stroke. Warfarin, an anticoagulant, requires frequent monitoring and indefinite use, and is associated with increased bleeding risk.

In contrast, subjects who receive the WATCHMAN device can be weaned off anticoagulants.

WATCHMAN device

Aurora St. Luke’s is one of 60 sites nationwide and one of two centers in Wisconsin authorized to implant the WATCHMAN device (Boston Scientific Corp., Natick, Mass.) in a research study of left atrial appendage closure in subjects with atrial fibrillation. In the U.S., the WATCHMAN is an investigational device, limited by federal law to investigational use.

Ninety percent of strokes in people with atrial fibrillation occur due to formation of a blood clot in the left atrial appendage. The WATCHMAN device is percutaneously implanted using a transseptal approach at or slightly distal to the ostium of the left atrial appendage to trap blood clots before they exit the appendage. To date, Aurora physicians have implanted eight WATCHMAN devices.

Subjects who undergo percutaneous treatment with the WATCHMAN device typically are discharged after a day. After about six months, pharmacological therapy is reduced to aspirin alone for the remainder of the subject’s life.

“This allows subjects at risk of stroke who may not be able to take blood thinners an alternative approach of treatment,” Dr. Sra said.

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Electrophysiologist, heart failure specialist join Aurora’s cardiology staff

New and familiar faces recently joined Aurora Health Care’s cardiovascular program, allowing the organization to better meet the needs of its patients.

Mohamed S. Rahaman, MD
Electrophysiologist Mohamed S. Rahaman, MD, joined the Cardiac Electrophysiology department after participating in the organization’s Cardiovascular Disease and Advanced Cardiac Electrophysiology Fellowship programs at Aurora St. Luke’s Medical Center, Milwaukee.

Dr. Rahaman’s commitment to research is evident by his published works. He recently presented a study on a novel fluoroscopic method to determine the timing of left ventricular contraction from motion analysis of cardiac veins at the Heart Rhythm Society 2012 Scientific Sessions.

Dr. Rahaman is board certified in internal medicine from the University of Illinois at Urbana-Champaign. He is a member of the Heart Rhythm Society and the Cardiovascular Outcomes Research Consortium.

“It is an honor and privilege to note that the FUNCTIONS that bring to Aurora Health Care,” said A. Jarnell T. MD, president of Aurora Cardiovascular Services. “This will provide clinical expertise in two rapidly growing fields — electrophysiology and vascular cardiology.”

Omar M. Cheema, MD
Heart Failure and Transplant Cardiologist

Omar M. Cheema, MD, Cardiologist Omar M. Cheema, MD, joined Aurora Cardiovascular Services’ Heart Failure and Transplant Cardiology department.

Dr. Cheema completed fellowship training in cardiovascular disease and advanced heart failure and cardiac transplantation at the Methodist DeBakey Heart & Vascular Center, Houston, and the University of Texas Medical Branch, Galveston, Texas. He also completed training in cardiac magnetic resonance imaging at The Methodist Hospital. His research interests include application of cardiac magnetic resonance imaging to study myocardial fibrosis.

At the 2012 15th annual Scientific Sessions of the Society for Cardiac Magnetic Resonance, Dr. Cheema presented a study on patterns of fibrosis by cardiac magnetic resonance imaging in patients with conduction abnormalities.

“I chose Aurora because of its stellar reputation in cardiology,” Dr. Cheema said. “I also like to continue the excellent clinical and research work being done by them.”

He is based at Aurora St. Luke’s, where the transplant program is in the top 10 percent in the nation.

“We welcome the many skills that these talented physicians bring to Aurora Health Care,” said A. Jarnell T. MD, president of Aurora Cardiovascular Services. “This will provide clinical expertise in two rapidly growing fields — electrophysiology and vascular cardiology.”

Omar M. Cheema, MD
Heart Failure and Transplant Cardiologist

Mohamed S. Rahaman, MD
Electrophysiologist

Clinical trial: Aurora cardiac teams test safety, efficacy of laser atherectomy, drug-eluting balloon angioplasty

Researchers are studying different ways to treat the effects of atherosclerosis at Aurora St. Luke’s Medical Center.

EXCITE ISR

Principal investigator Anjan Gupta, MD, and his team are testing the safety and efficacy of laser atherectomy with balloon angioplasty compared to balloon angioplasty alone in the treatment of subjects with above-the-knee peripheral artery in-stent restenosis at Aurora St. Luke’s.

There will be up to 35 study locations nationwide; Aurora St. Luke’s is the only site in Wisconsin participating in the trial.

In a PACT Admiral Drug-Eluting Balloon vs. Standard Balloon Angioplasty for the Treatment of Superficial Femoral Artery and Proximal Popliteal Artery (INPACT SFA II) [ClinicalTrials.gov identifier: NCT01566461].

Dr. Gupta and his team are documenting major adverse events 30 days and target lesion revascularization six months postprocedure.

“Patients with restenosis in stents in lower-extremity circulation have limited options for treatment,” Dr. Gupta said. “To date, no one knows how best to treat this condition. We are looking at the usefulness of laser technology to open up clogged stents in the leg.”

INPACT SFA II

Principal investigator Mark Mewissen, MD, and his team are testing the safety and efficacy of a drug-eluting balloon compared to a standard angioplasty balloon in the treatment of subjects with peripheral arterial disease in the superficial femoral and proximal popliteal arteries at Aurora St. Luke’s.

There will be up to 55 study sites nationwide; Aurora St. Luke’s is the only site in Wisconsin participating in the trial. INPACT Admiral Drug-Eluting Balloon vs. Standard Balloon Angioplasty for the Treatment of Superficial Femoral Artery and Proximal Popliteal Artery (INPACT SFA II) [ClinicalTrials.gov identifier: NCT01566461].

There will be up to 35 study locations nationwide; Aurora St. Luke’s is one of only two sites in Wisconsin participating in the EXCITE Laser Randomized Controlled Study for Treatment of Femoropopliteal In-Stent Restenosis (EXCITE ISR) [ClinicalTrials.gov identifier: NCT0130628].

Subjects who enroll in this prospective, multicenter, single-blinded, randomized study have angiographic evidence of a target lesion that consists of a single de novo or non-stented restenotic lesion, or is a combination lesion in the superficial femoral or proximal popliteal arteries. After randomization, subjects undergo either percutaneous transluminal angioplasty with an INPACT Admiral drug-eluting balloon (Medtronic Inc., Minneapolis, Minn.) or a standard balloon.

Dr. Mewissen and his team are documenting target lesion revascularization and major adverse events 60 months postprocedure.

“Drug-eluting PTA technology is an innovative progression in the treatment of peripheral vascular disease,” Dr. Mewissen said. “We are excited to take part in this trial to discover additional effective endovascular options for patients who complain of and suffer from ischemic leg pain and limited mobility caused by claudication.”

Clinicians wanting information should contact:

EXCITE ISR trial
Don Lobacz, RN, CREC Research Coordinator 414-696-3438
donald.lobacz@aurora.org

INPACT SFA II trial
Christina Schreiter, BSN Research Coordinator 414-355-2728 christina.schreiter@aurora.org

Anjan Gupta, MD
Director of the Cardiovascular Catheterization Laboratory and the Cardovascular Fellowship Program

Mark Mewissen, MD
Administrative Director of the Vascular Center

Omar M. Cheema, MD
Heart Failure and Transplant Cardiologist

Mohamed S. Rahaman, MD
Electrophysiologist

Percutaneous transluminal angioplasty with an INPACT Admiral drug-eluting balloon (Medtronic Inc., Minneapolis, Minn.) is used to remove blockage. The Turbo-Target System is an investigational device limited by U.S. federal law for investigational use for the treatment of in-stent restenosis. Image courtesy of Spectranetics Corp.
For high-quality heart care, ‘snowbird’ flies home to Aurora St. Luke’s
Cardiac experts restore energetic, active lifestyle for Florida retiree

Rather than hitting the links in Florida, snowbirds Jerome and Patricia Fechter spent half a winter trucking to Aurora St. Luke’s Medical Center in Wisconsin. But it was worth it.

After more than a year of worsening dyspnea, Jerome, 72, was diagnosed with hypertrophic obstructive cardiomyopathy at Aurora St. Luke’s Hypertrophic Cardiomyopathy Center, the only such center in the state. But that didn’t mean the end of his active lifestyle.

Retirement doesn’t mean slowing down
Jerome had always been an active, physical and competitive man.

For decades, he and his family ran Fechter’s Highway 60 U-Pick-Em in Cedarburg, the largest strawberry farm in Wisconsin. During summer high season, his fields would see 2,500 visitors a day. More than 10,000 school children visited during fall pumpkin season each year.

Retired since 2004, he and his wife Patricia split their time between Wisconsin and Florida, where he has his choice of many premium golf courses.

“I was up to golfing four days a week and riding bikes 10 to 12 miles a day, four days a week,” Jerome said.

But more than three years ago, Jerome began to notice that he would be out of breath by the ninth hole.

“I’d go maybe two or three holes and I’d be out of juice,” he remembered. Although he dismissed these symptoms as a sign of old age, his health progressively got worse.

While lifestyle changes may be enough for some patients with hypertrophic cardiomyopathy, the team at Aurora St. Luke’s suggested alcohol septal ablation as a long-term solution. This percutaneous, invasive procedure destroys a small portion of the thickened interventricular septum with an alcohol-based solution to reduce obstructed blood flow. Alcohol septal ablation has a greater than 90% cure rate with 1 to 2 percent risk for severe complications.

Other treatment options include surgical resection of the thickened heart muscle or pacemaker, or implantable cardioverter-defibrillator implantation. The type of therapy is determined by the severity of the disease and symptoms, which include syncope, dyspnea, angina, dizziness and heart palpitations.

On Aug. 22, 2011, Jerome underwent alcohol septal ablation and almost immediately felt better.

“I told my doctor it’s a miracle,” Jerome said. “I felt so elated. It was almost an instant change.”

“Dr. Tajik was simply amazing,” Lisa said. “He genuinely cared for my father, like he was the most important patient in the world. He listened to us when we knew something was wrong, no matter what the test results showed. He cared for our entire family.”

“I was completely impressed with Dr. Tajik and his staff,” Jerome said. “I felt very comfortable asking them anything. They responded to any questions quickly and thoroughly. They went out of their way to build a family relationship, not just a doctor-patient relationship.”

Two of the Fechter’s four children have hypertrophic cardiomyopathy and are being treated by Dr. Tajik. Two other family members were diagnosed following Jerome’s care.

“As science improves, they’ll be able to find that gene with a simple blood sample,” Jerome said.

“This was life-changing for all of us children,” Lisa said. “Without this incident, my brothers would never have been tested. Who knows what their lives would be like in 20 years?”

“Because Dr. Tajik has started my sons on medication now, when they are 20, 30 years younger—they probably won’t need a septal ablation procedure,” Lisa said, comparing her children’s care management to her husband’s. “We hope they are well and healthy when they are their dad’s age.”

Enjoying an energetic lifestyle
One year after the procedure, Jerome and Patricia celebrated 51 years of marriage. They look forward to many more years together—and a very active lifestyle. Living in central Florida allows them to enjoy the outdoor activities they love year-round.

“Last winter, we rode bikes 15 to 20 miles in the morning, played golf in the afternoon and still had energy to do other things in the evening,” Jerome said.

“I cannot say enough about the doctors at Aurora,” Patricia said. “They absolutely gave us our lives back again. We can now enjoy our retirement as we always thought it would be.”

“I am very, very appreciative to everybody on the Aurora Health Care team,” Jerome said. “I want to thank Drs. Mian, Bajwa and Tajik—one of the nicest men I’ve ever met—and Rachel [Loebig, NP] and all of my nurses. These are just super, super people.”

Hypertrophic Cardiomyopathy Center
Aurora St. Luke’s Medical Center
Physician Office Building
2801 W. Kinnickinnic River Parkway, Suite 575
Milwaukee, WI 53215
414-385-2400
855-229-2400

A. Jamil Tajik, MD
President of Aurora Cardiovascular Services,
Director of Aurora Cardiac Specialty Centers

Tariq Bajwa, MD
Medical Director of the Cardiac/Pulmonary
Interventional Program, Clinical Director of the Vascular Center, Director of the Interventional Cardiology Fellowship Program
Multidisciplinary approach

Aurora utilizes a multidisciplinary approach that includes evaluation by renowned echocardiographers and imaging specialists, and collaboration among eminent interventional cardiologists and electrophysiologists regarding treatment options. Surgeons and anesthesiologists provide additional support.

The team provides appropriate options to each individual subject. For example, if an eligible subject has had prior open heart surgery, the WATCHMAN option would possibly be offered. Surgical stapling or closure of the atrial appendage can be reserved for the few subjects with atrial fibrillation who are not eligible for the device, yet require avoidance of anticoagulation therapy.

Prior to the WATCHMAN implantation procedure, a transesophageal echocardiogram is obtained to measure the left atrial appendage. Fluoroscopic guidance is used to deliver the WATCHMAN device, and both fluoroscopy and transesophageal echocardiography are used to confirm device release. After the procedure, transthoracic echocardiography is used to verify closure of the foramen ovale.

Atrial Fibrillation Ablation Center

Starting in 1977, Aurora Health Care’s Cardiac Electrophysiology department was one of the first programs in the nation to diagnose and treat patients with arrhythmias using the most advanced technologies available, some of which were developed by Aurora physicians. The high-volume program is a nationally recognized leader in diagnosing, managing and treating atrial fibrillation.

Clinicians seeking information on who may benefit from alternative stroke prevention options in people with atrial fibrillation, may contact research coordinator Anthony Chambers, BSN, CCRC, at anthony.chambers@aurora.org or 414-383-2565.

Atrial Fibrillation Center

Aurora St. Luke’s Medical Center Physician Office Building 2801 W. Kinneicnic River Parkway, Suite 777 Milwaukee, WI 53215 T 800-649-1989 F 414-649-5769 cardiovascular@aurora.org Aurora.org/Services/ Cardiovascular

Sneak peek

Aurora Health Care is opening its Channelopathy Clinic for patients with cardiac channelopathies, such as long QT, short QT and Brugada syndromes, catecholaminergic polymorphic ventricular tachycardia, and arrhythmogenic right ventricular cardiomyopathy.

Cardiac channelopathies are associated with sudden cardiac death. Check out the next issue for a story on the clinic and how Aurora is helping patients with these potentially life-threatening conditions.

Aurora authors highlight imaging modality for evaluation of left atrial mechanics

Aurora Health Care authors Indrajit Choudhuri, MD, Arshad Johangiri, MD, and Bijoy K. Khandheria, MD, in collaboration with other national and international specialists, explored “New echocardiographic techniques for assessment of left atrial mechanics” in the December issue of European Heart Journal- Cardiovascular Imaging.

The review identifies invasive echocardiography modalities available to evaluate parameters of left atrial function. The authors highlight two-dimensional and three-dimensional speckle tracking echocardiography as an emerging technology to detect early left atrial dysfunction before structural changes occur.

Left atrial anatomical and functional assessments with the aid of echocardiography are robust and powerful markers of cardiovascular outcomes in patients with atrial fibrillation and heart failure. In particular, atrial electrical and mechanical coordination is a common pathophysiology identified in these patients. Yet such abnormalities have not been considered a clinically relevant target for therapy, in part due to limited treatment options and lack of data demonstrating benefits. Further, the fluid-flow characteristics that result from myocardial motion are a heretofore neglected component of cardiac physiology, and an understanding of transatrial fluid dynamics is largely deficient.

“These deficiencies must be viewed in contrast to the significant clinical and economic impact that atrial fibrillation and heart failure contribute to cardiovascular morbidity, mortality and health care expenditures,” Dr. Choudhuri said. “Defining this electromechanical-hydrodynamic relationship is an essential step toward a more comprehensive understanding of atrial fibrillation and heart failure as ‘diseases of the left atrium,’ and should provide insight to current and future therapy.”

Aurora Cardiovascular Services

Medical education events

To request information or register, please email Laurel Landa at laurel.landa@aurora.org or call 414-219-6848, unless otherwise noted.

April 6, 2013 | Pewaukee, WI

10th Preventive Cardiology Conference: Mending Our Modern Lifestyle

May 4 to 5, 2013 | Milwaukee, WI

Valvular Heart Disease: Newer Management Strategies: A Case-Based Approach

May 17, 2013 | Pewaukee, WI

Cure of Patients With Arrhythmias From Bedside to Clinic

May 23 to 26, 2013 | New York, NY

Sights and Sounds of Echocardiography: In the Heart of the Big Apple – Denise Meysoﬁl
414-649-5616 • denise@mdmeetingetc.org

Aug. 17 to 18, 2013 | Milwaukee, WI

Echo Milwaukee: The Pyramid of Success

Oct. 11 to 13, 2013 | Lake Geneva, WI

Cardiology Update: A Weekend Review at Lake Geneva

Dec. 5 to 8, 2013 | San Diego, CA

ePIC: Excellence in the Practice of Cardiovascular Ultrasound – Denise Meysoﬁl
414-649-5616 • denise@mdmeetingetc.org

Dec. 6 to 7, 2013 | Chicago, IL

AF/VT/VF Summit

January 2014 | Pewaukee, WI

23rd Annual New Developments in Cardiology
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**Hospital location**

★ Aurora St. Luke’s Medical Center

Advanced medical services are available at Aurora’s 15 hospitals and 155 clinics located throughout eastern Wisconsin and northern Illinois.