Clinical Trial Proves Effectiveness of Cardiac Resynchronization Therapy in Slowing Heart Failure

In the first reports of a large clinical trial closely watched by heart rhythm experts, global medical device maker Boston Scientific announced in June that cardiac resynchronization therapy with defibrillation (CRT-D) slows the progression of heart failure in “early stage” heart failure patients, according to the Multicenter Automatic Defibrillator Implantation Trial with Cardiac Resynchronization Therapy (MADIT-CRT) study.

Cardiac resynchronization therapy devices are unique internal defibrillator/pacemaker devices that improve the heart’s pumping ability by delivering small electrical impulses that help synchronize contractions of the left ventricle—the heart’s main pumping chamber. In addition, CRT-Ds monitor the heart for potentially fatal rhythms, and if needed, the device delivers a lifesaving shock to restore a normal heart rhythm.

The MADIT-CRT trial found that these devices were associated with a 29 percent reduction in death or heart failure interventions when compared to traditional implantable cardioverter defibrillators (ICDs).

“We are very encouraged by these initial positive results, and we are hopeful they will eventually lead to a wider population of heart failure patients being treated with CRT-D therapy,” said Fred Colen, president of Boston Scientific CRM, in a statement.

Heart failure patients are ranked from Class I-III-IV according to their degree of symptoms—from displaying no symptoms at all to being completely bedridden. Approximately 70 percent of all heart failure patients in the U.S. fall into Class I or II, but they are not currently indicated for treatment with CRT-D devices.

The findings of the study represent the first significant research results that demonstrate that some types of implantable devices are not only effective in responding to arrhythmias, but the devices also have a therapeutic benefit in slowing or even reversing the progress of heart failure.

Led by Dr. Arthur J. Moss, professor of medicine at the University of Rochester, Rochester, New York, the $38 million study is the world’s largest randomized Class I/II CRT-D trial, with 1,820 patients enrolled at 113 centers in 14 countries.

Boston Scientific hopes to publish these findings later this year.

Registration Open for the 2009 SCAA Annual Meeting & Medical Education Conference!

As previously announced, the 2009 SCAA Annual Meeting & Medical Education Conference will be held in Chicago the weekend of October 9-11 at the Hyatt Regency O’Hare, minutes from the airport, and convenient to major interstates and downtown Chicago.

Registration material will be mailed soon, and online registration will also be available on the SCAA website beginning August 1. In the meantime, the program of events and activities include:

Friday, October 9
Continuing Medical Education Conference

Topic: Advancements in Sudden Cardiac Arrest

The Heart Rhythm Society, in collaboration with the Sudden Cardiac Arrest Association and Chicago partner Midwest Heart Foundation, will present an interactive, one-day symposium to address sudden cardiac arrest from a multifaceted, multi-disciplinary approach. The program will cover sudden cardiac arrest as it relates to before, during, and after hospital experiences of patients, including information on effective public access defibrillator programs, therapeutic hypothermia, the genetics of sudden death, and risk stratification.

The symposium will include didactic lectures and panel discussions, case studies, and survivor stories.

This program is designed for Primary Care Physicians, General Cardiologists, Allied Professionals.

Program Chairs
• N.A. Mark Estes, III, MD, Tufts University School of Medicine
• Bradley P. Knight, MD, University of Chicago School of Medicine
• Vincent N. Mosesso, Jr, MD, University of Pittsburgh School of Medicine
• David J. Wilber, MD, Loyola University School of Medicine

Registration will be available online at the SCAA website by August 1. The registration fee for physicians is $129. Registration for nurses and allied health professionals is $99. A late fee of $20 will be charged for all registrations submitted after October 4, 2009. Please visit www.suddencardiacarrest.org for registration and more information.

Friday evening, October 9
SCA Survivor Celebration!

In honor of SCA Awareness Month, SCAA will hold a celebratory event to honor SCA survivors and their special guests. It will be an evening to mingle, reunite, network, and honor those who are the inspiration for all we do as we work to save lives from sudden cardiac arrest.

Saturday, October 10
SCAA Annual Meeting

The day’s business sessions will be divided into two parts: a morning Congress with all attendees to meet other volunteers, share best practices, and discuss the progress of SCAA, to be followed by a series of roundtable seminars from which attendees will be able to select topics of interest, such as public relations and media training.

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Western Pennsylvania Chapter

The Monmouth Township Ambulance Association, which carries out SCAA’s Eastern Pennsylvania Chapter operations, applied for a $540,000 federal grant to fund an initiative that will place nearly 300 defibrillators in getting places across Lancaster County in 2010. With the launch of Heart Safe, chapter leader James Weber hopes to build on the success of the MTA’s campaign that placed more than 20 AEDs in public places in Manheim Township. “We’ve got a much better chance of saving that person if there’s a defibrillator nearby,” Weber said. The recipient of the grant will be determined by September.

Garden State Chapter

The Valley Hospital Live wires support group, which carries out SCAA’s Garden State Chapter operations, has chosen the Joseph Cipolla Senior Citizens’ Center in Paramus, New Jersey as the recipient of a automated external defibrillator (AED) donated to SCAA by Cardiac Science. Live Wires is a support group for individuals with implantable defibrillators. “The Sudden Cardiac Arrest Association is thrilled that the Valley Hospital is helping us get started in the Ridgewood/Paramus area,” said Chris Chiames, SCAA’s Executive Director. “The physicians and staff at Valley realize the importance of taking the message of sudden cardiac arrest prevention outside the walls of the hospital and to involve their patients to go out into the community to help us make people smarter about the condition, risk factors, and treatment options for the leading cause of death in this country.”

Greenville Chapter

Ron Vergnolle, a survivor of SCA, rode his bicycle nearly 300 miles through South Carolina to raise money for AEDs. The three-day journey started in the mountains of Caesar’s Head and took him to the coast of Edisto. Ron’s wife and chapter leader, Britt Vergnolle, followed behind the crusader in a car with their three children to support him. The trip made nearly $1,000, but more importantly, it taught people what they need to do to survive.

Iowa Affiliate

Several hundred participants gathered at the Iowa State Capitol to discuss the importance of the American Heart Association’s Start! Heart Walk. Among them were 17 members of SCAA’s Iowa Affiliate, AED Access for All, who set up a table to educate passers-by about AED usage in addition to walking. Iowa AED Access for All raised more than $2,400 for the American Heart Association. A local newspaper had staff on-hand to cover the event, and affiliate leader Mary Tappe was showcased in a story that appeared in the June 7 issue of The Des Moines Register.

Long Island Miracles

On April 26, Long Islanders celebrated the 4th Annual Tri-State Heart Walk with representatives from the Long Island Miracles Chapter did a short presentation discussing SCAA, the chapter, and then donated a DeFibTech AED, which is going to the North Bronx Youth League. To find out more about the Robbie Levine Foundation, visit www.robbielivefoundation.org.

Minnesota Affiliate

Praising his “heroic actions and prompt response,” SCAA director Steve Johnston awarded Officer Jeffrey Miloite with a Certificate of Heroism and an SCAA Hero Ribbon on June 10. Miloite was honored for his quick actions in saving the life of 58-year-old Ellard Winter of Arlington, Minnesota, who suffered cardiac arrest while at work. Johnston stated that Miloite’s use of the police department’s AED kept Winter from becoming one of the 95 percent of SCA victims who do not survive. Miloite’s actions “set a fine example that can hopefully be followed by other officers,” Johnston said.

Northeast Ohio Chapter

On May 29, the Northeast Ohio Chapter held their “Breakfast of Champions” event in order to educate the public about sudden cardiac arrest. As the name implies, a heart healthy breakfast of good grains and fresh fruit was available to all 120 attendees. Both health care workers and SCA survivors spoke about SCA and the importance of CPR and early defibrillation. Dr. Terry Gordon of Akron and U.S. Rep. Betty Sutton were among the all-star cast of speakers. In accord, there were nine AEDs as door prizes sponsored by Boston Scientific, EMH Regional Health System, Medtronic, North Ohio Heart Center, St. Jude Medical, and ZOLL.

San Francisco Bay Area Chapter

An Alamo, California girl was recognized at an emergency medical care committee meeting on June 10 for her actions in saving a woman who suffered cardiac arrest on a train. Sara Broski, 15, performed CPR on a woman who collapsed on a San Francisco Bay Area Rapid Transit train on May 13. Elizabeth Scroggs, 52, was kept alive long enough for emergency personnel to respond. Members of the San Francisco Bay Area Chapter of SCAA were among the 80 attendees at the ceremony. Broski was presented with the SCAA Hero Award Certificate and an SCAA Hero Pin. Members of the emergency response team (firefighters Rick Stratton, Mike Espinosa, and Joaquin Avila and ambulance crew Zackery Morehouse and Bruce Stricker) were also awarded with pins and certificates. Scroggs was presented with an SCAA Survivor Pin.

Southeastern Massachusetts Chapter

Taunton City Hall and the SCAA recently honored police officer Peter J. Cor and six city firefighters — Pvt. Michael Dunham, Lt. Mark Dupras, Pvt. Jeffrey Gallagher, Pvt. George Kelly, Pvt. Chad Morin, and Pvt. Sarah Rendeavere — for saving a man’s life at the EIl’s Club back in January. Bob Schreiber, the chairman of the Sudden Cardiac Arrest Association, and Muriel “Rusty” Watterson, the organization’s local chapter leader, were on hand at City Hall to present citations and pins to the first responders.

SCAA Sponsors (as of July 13, 2009)

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St. Jude Medical Foundation

If you are interested in becoming an SCAA sponsor, please refer to our website, www.suddencardiacarrest.org or email us at info@suddencardiacarrest.org.
MEDICAL DIRECTOR'S CORNER

By Vince Mosesso, MD, FACEP, SCAA Medical Director

For this issue of the newsletter I would like to chat with you about “EMS” — that is, emergency medical services — perhaps better known as Emergency Medical Technology (EMT). What do you know about EMS, and what do you know about your local EMS agency? I suggest that you visit your local EMS website and call your local EMS for a tour of the main station. What you are likely to find is that EMS is a critical link between bystander care and hospital care. While much of the public is familiar with the term "bystander," it is often essential for neurologically-intact survival, the rapid response and professional care provided by EMS responders is also extremely important. The benefit of early post-resuscitation care, including the early initiation of cooling (therapeutic hypothermia), is now being appreciated and further extends the impact of EMS.

EMS is responsible for providing out-of-hospital emergency care in the community. Units are usually dispatched by the local 9-1-1 public safety answering point (PSAP) and dispatch center. The center should use an emergency medical dispatch protocol that prioritizes calls by severity and expediently dispatches the appropriate units based on the nature and location of the call. For potential cardiac arrest calls, in most communities, the closest "first responder" should be dispatched simultaneously with the EMS unit. The first responder should be equipped with and trained to use automated external defibrillation (AED). These are typically firefighters, police officers, or designated quick response personnel (QRP) dependent on local community characteristics. In high-quality EMS systems, first responders arrive within four to five minutes of the time the call is received at the PSAP.

EMS crews may be trained to basic life support (BLS) or advanced life support (ALS) level, the latter known as paramedics. (Remember Johnny and Roy from the old TV show Emergency!) BLS personnel provide CPR, use an AED, assess the patient, and assist with advanced life support when advanced life support personnel (ALS) arrive. ALS personnel are able to use a cardiac monitor, perform manual defibrillation, provide more advanced forms of airway management and medication administration, and perform other services. Paramedics are able to provide most of the interventions for cardiac arrest patients that would be provided in the emergency department. Paramedics have many hours of training in their prehospital practice. This training includes measuring the quality of CPR, timeliness of defibrillation, adequacy of airway management, and other parameters. Feedback to the providers has shown to improve performance.

While the acute care provided by EMS is a lynchpin for survival from SCA, many local EMS agencies make an impact beyond emergency medical care. These EMS agencies are involved in public education to both increase awareness of SCA and the importance of immediate bystander action and often teach classes in CPR and AED use. Some EMS agencies are very active in spearheading the implementation of and supporting the maintenance of public access defibrillation programs at public and private sites in their communities, and a growing number of EMS professionals involved in our chapters and affiliates as we expand our public education initiatives. Some argue that these activities may lead to more lives saved than the acute care provided to patients already in SCA.

Finally, as more and more local government agencies face budget constraints, the impact of funding on the ability of local EMS and public safety first responders to respond to medical emergencies should be of interest to SCAA members.

Do what you know about your local EMS agency? Do they use emergency medical dispatch programs? Are first responders trained and equipped with AEDs? Is there a QP process in place for cardiac arrest care? Do they train and educate community residents about cardiac arrest and bystander care? Do they support public access defibrillation programs in the community? Is your EMS agency adequately funded?

I encourage you to become informed about your local EMS, and offer to get involved and help your EMS agencies with community initiatives that will foster improved bystander care of cardiac arrest victims in your neighborhood.

SCAA LAUNCHES THREE NEW CHAPTERS

Greater Atlanta Chapter

Leader: Lisa Williams

Lisa Williams, RN, is the president of the Greater Atlanta Chapter of SCAA, is committed to prevention and early identification of risks for SCA. Williams is a registered nurse with more than 15 years of experience. She is currently working in the specialty of electrophysiology, and she has initiated a community-wide public education campaign to train the general public about the signs of SCA. The second focus will be on peer support — offering support to survivors of SCA and ICD recipients, as well as their family and friends.

Greenville, SC Chapter

Leader: Britt Vernigrole

The Greenville Chapter is led by Britt Vernigrole, community volunteer, mother of three young children, and the wife of an SCA survivor. After experiencing the shock of their lives (literally), Britt and her husband, Ron, knew they needed to spread the word about SCA and AEDs. Ron’s SCA occurred 10 feet from an AED at his local gym. Britt knew how extremely fortunate he was to be there when this happened and wants to help ensure that another husband, wife, son, daughter, or sibling is as lucky as Ron was.

Ron Vernigrole recently completed a bike ride crossing the entire state of South Carolina to raise money for the purchase and donation of AEDs.

East Valley Chapter

(Phoenix, AZ)

Leader: Sara Edmund

Sara Edmund, RN, has worked in the cardiac health care industry for more than six years in a clinical setting as well as education. She is currently studying for her Doctor of Nursing Practice degree within the nurse practitioner field.

The East Valley Chapter intends to further the mission of the Sudden Cardiac Arrest Association through education and advocacy, awareness and outreach, and support for those whose lives have been changed by sudden cardiac arrest.

For a full roster of SCAA’s growing network of chapters and affiliates, please visit www.suddencardiacarrest.org, and click on the Chapters/Affiliates button.
On the day she suffered sudden cardiac arrest, Dawn Botwen-Hauver of Miami, Florida, remembers feeling the best she had in a long time. The 41-year-old wife and mother of two received a phone call from her son’s school on February 11, 2009, alerting her that her five-year-old son wasn’t feeling well. Little did she know how his illness would end up saving her life.

Dawn’s family doctor instructed her to take her son immediately to the hospital. Weakened by his illness, Dawn’s son could barely walk, and somehow she managed to find the strength to carry him into the hospital. “As I approached the emergency room at Joe DiMaggio Children’s Hospital, I told the receptionist that I felt like I was going to faint,” remembers Dawn. She then collapsed and went into sudden cardiac arrest.

Her husband arrived to find that his son was no longer the issue, and he was immediately escorted to the adult emergency room where CPR was being performed on his wife.

After her condition stabilized, a cardiac catheterization was performed, which showed that none of her arteries were blocked. She was then placed in a hypothermic coma for 24 hours to reduce swelling in her brain and prevent any potential brain damage from taking place.

“The on the day I was to be taken out of the coma, someone working on my case told my husband there could be many outcomes — from brain damage to death to not being able to breathe on my own,” said Dawn. Eventually, she was able to be taken off machines and begin the 13-hour-long “defrosting” process. To the relief of her entire family, Dawn awoke, was able to speak and had no signs of brain damage.

Initially, Dawn was treated for what was thought to be a seizure, but was later diagnosed as ventricular fibrillation and long QT syndrome coupled with premature ventricular contractions (PVCs). She immersed herself in educational materials, finding out as much as she could about long QT syndrome. She was also implanted with an ICD.

Two weeks later, after going into ventricular fibrillation, passing out again, and being shocked twice, she was back in the hospital and learned that the ICD simply needed adjusted. And just weeks after the ICD adjustments were made, Dawn was back on the road to feeling well. She soon learned that long QT syndrome is either genetic or acquired, and since she had children, she needed to identify if the deadly condition could be passed on.

“I was referred to as a ‘miracle’ by one of the hospital administrators, and I have my five-year-old to thank. Had this not happened at the hospital, I would not be here today,” notes Dawn.

Dawn’s family is currently undergoing genetic testing for long QT syndrome. As a result of her life-altering experience, she has become an advocate for AEDs throughout her south Florida community.

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Healthy Heart Expo Brings Together Advocacy Groups and Industry Partners to Educate Policymakers on Heart Health Initiatives

On June 9, SCAA hosted the Healthy Heart Expo on Capitol Hill to raise awareness about sudden cardiac arrest (SCA) and heart disease among policymakers and congressional aids. The timing of the event couldn’t have been better as Congress focuses on health care reform. With nearly 20 exhibitors from the corporate, nonprofit, and government sectors, the event was well attended by nearly 120 congressional staff members, medical professionals, industry representatives, and survivors of sudden cardiac arrest, among others. The event was supported by the Congressional Heart and Stroke Coalition, Congressional Black Caucus, Congressional Hispanic Caucus, and the Congressional Caucus on Women’s Issues.

Exhibitors included:
- Abbott Vascular
- American College of Cardiology
- American Heart Association
- Association of Black Cardiologists
- AstraZeneca
- Boston Scientific
- Cambridge Heart
- Cardiac Science
- Centers for Disease Control
- George Washington University
- Cheney Cardiovascular Institute
- Medtronic
- National Heart, Lung and Blood Institute
- Pfizer
- Results for Life
- Society for Women’s Health Research
- St. Jude Medical
- WomenHeart: The National Coalition for Women with Heart Disease

Representative Lois Capps (D-CA), chair of the Congressional Heart & Stroke Prevention Coalition, welcomed attendees and addressed the importance of cardiovascular health and its economic impact on America’s health care system.

To coincide with the event’s “heart healthy” theme, attendees were treated to a variety of good-for-your-heart snack items compliments of the California Walnut Commission, Corazonas, Sun-Maid, Western Pistachio Association, and Zoria Farms, along with wine donated by the Wine Institute.

Congratulations go out to Claudius Zorokong, a staff assistant in office of Representative Niki Tsongas (D-MA), whose name was randomly selected in the AED give-a-way contest. SCAA will now donate a Cardiac Science PowerHeart AED to a nonprofit organization of his choosing that is located in Massachusetts.

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Donate Now, Save Later!

SCAA gives portable CPR devices to donors

The ZOLL PocketCPR® device provides audible and visual instructions before and during a sudden cardiac arrest (SCA) rescue, giving chest compression feedback literally in the palm of your hand. It is currently being used in a statewide initiative in Arizona to teach 6th through 12th graders how to properly perform CPR and then allow them to teach family members as well.

For a donation of $200 or more, you can help SCAA continue to fulfill its mission of raising awareness of SCA and working to eliminate SCA deaths — and you’ll get a life-saving device that should be standard equipment in emergency medical kits, hospitals, and even in the homes of those at risk of SCA.

Hurry — supplies are limited to the first 50 donations! To make a donation, visit SCAAS’s website at www.suddencardiacarrest.org and click on the “Donate Now” button.