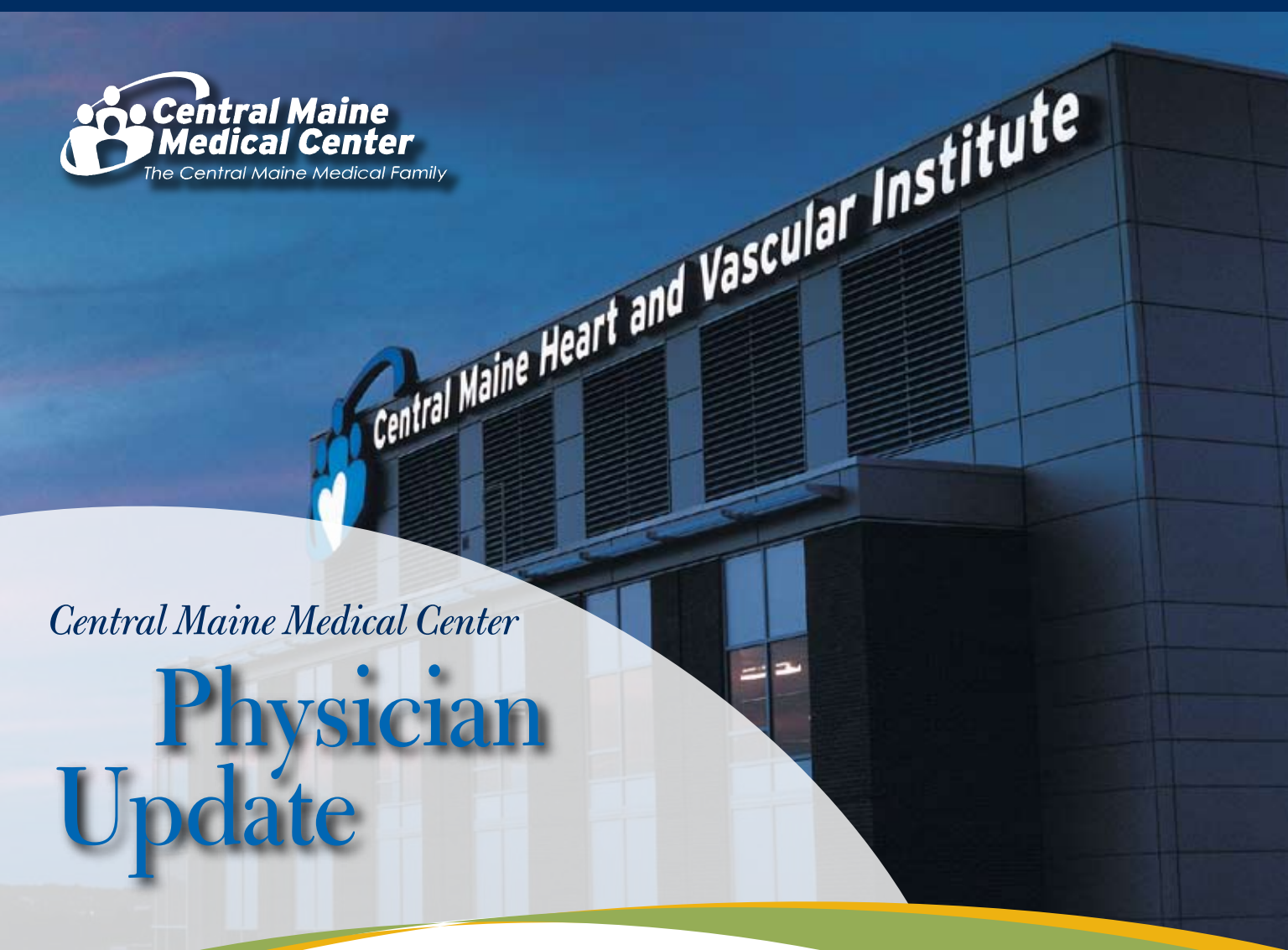
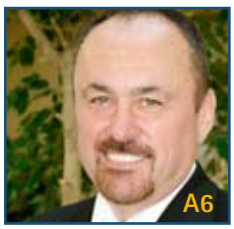
Central Maine Medical Center
The Central Maine Medical Family



Central Maine Medical Center

Physician Update



ICDs CONTRIBUTE TO DECREASED INCIDENCE OF SUDDEN CARDIAC DEATH IN PATIENTS WITH

BY BROOKE S. RITVO, M.D.

Sudden cardiac death (SCD) remains a significant problem in the United States, with an estimated 450,000 such deaths occurring annually.

Most people who experience sudden death are those with coronary artery disease or some other form of structural heart disease. The mechanism of SCD in the vast majority of cases is ventricular tachycardia (VT) or ventricular fibrillation (VF). Initially, implantable cardioverter defibrillators (ICDs) were developed to stop life-threatening arrhythmias in patients who had experienced a cardiac arrest or an episode of a sustained life-threatening ventricular arrhythmia. Several trials were performed which demonstrated that ICDs were superior to antiarrhythmic drugs in reducing SCD in patients who had experienced sustained ventricular arrhythmias. These studies include the Antiarrhythmics vs. Implantable Defibrillators trial (AVID), Cardiac Arrest Study Hamburg trial (CASH) and the Canadian Implantable Defibrillator Study (CIDS).

Subsequently, studies were performed which established the benefit of ICD implantation as a primary prevention tool in certain patients with ischemic cardiomyopathy and nonsustained VT. The most important of these studies include the Multicenter Automatic Defibrillator Trial (MADIT) and the Mulitcenter Unsustained Tachycardia Trial (MUSTT). The purpose of these trials was to determine if ICD implantation would decrease mortality in a population of patients with a depressed ejection fraction (EF<35-40%), history of myocardial infarction (MI), and inducible VT during electrophysiologic testing (EPS). Both trials concluded that ICD therapy not only reduced SCD as compared to conventional therapy, but improved overall survival as well.

Despite these aforementioned trials establishing indications for ICD therapy, the rate of SCD has remained high, with an only 5% survival rate. Therefore, more aggressive attempts have been made to identify high-risk patients who would benefit from ICD implantation. A number of studies have recently been performed which support the use of ICDs in particular patient populations without a history of spontaneous or inducible arrhythmias.

One such study is the Multicenter Automatic Defibrillator Trial II (MADIT II). The purpose of MADIT II was to evaluate the potential survival benefit of a prophylactic ICD in patients with prior MI and EF<30% who had no arrhythmia qualifier, such as NSVT, and who did not undergo EPS. The patients had to be at least one month post-MI and could not have inotrope-dependent congestive heart failure (CHF) or a history of revascularization within 3 months of study entry. The patients were then randomized to optimal medical therapy or ICD implantation, with both groups on comparable doses of amiodarone, ACE-inhibitors, and ß-blockers. The patients were followed for 20 months, with the primary endpoint being total mortality. The study determined that prophylactic ICDs improved survival in this population with ischemic cardiomyopathy and EF<30%.

The Sudden Cardiac Death in Heart Failure Trial (SCD-HeFT) is another major trial establishing the benefit of prophylactic ICD implantation in patients with a low EF. Unlike MADIT II, this trial included patients with either ischemic or nonischemic cardiomyopathy. Patients had an EF≤35%, mild-to-moderate CHF, and were on opti-

mal medical therapy. Members of the study group were either randomized to receive one of two treatments: amiodarone therapy or ICD implantation, or were placed in a control group. The study determined that ICDs decrease mortality by 23%. The mortality benefit persisted in both ischemic and nonischemic cardiomyopathies. Amiodarone, when used as a primary preventative agent, did not improve survival.

"... it is clear that ICD implantation results in a decreased mortality in many patients with severe left ventricular dysfunction."

Now that it is clear that ICD implantation results in a decreased mortality in many patients with severe left ventricular dysfunction, screening such patients for possible ICD implantation has become critical. If these patients are treated with optimal medical therapy for several months but continue to have an EF≤35%, ICD therapy should be strongly considered. With such an approach, a positive impact may be made on the major public health problem of SCD.

Brooke S. Ritvo, M.D., a cardiologist who specializes in electrophysiology, practices with Central Maine Heart Associates in Lewiston and Oakland. The offices can be reached at 753-3900 and 861-5880, respectively.

Electrophysiologist joins Central Maine Heart Associates physician group

Brooke S. Ritvo, M.D., a cardiologist who specializes in electrophysiology, has been appointed to the Central Maine Medical Center Medical Staff. She is practicing with Central Maine Heart Associates, a clinical department of CMMC.

Prior to beginning her work in the Lewiston-Auburn area, Dr. Ritvo practiced for six years as an electrophysiologist with Arrhythmia and Pacemaker Consultants in West Orange, N.J.

A graduate of Wesleyan University in Middletown, Conn., she earned her medical degree from Albert Einstein College of Medicine in Bronx, N.Y. She completed an internship and residency at Columbia Presbyterian Medical Center in New York City. She served a fellowship in cardiovascular disease and a fellowship in electrophysiology at New York Presbyterian Hospital-Columbia Presbyterian Medical Center in New York City. She also served an electrophysiology fellowship at Montefiore Medical Center-Albert Einstein College of Medicine in Bronx, N.Y.

She has worked as a medical researcher, and has published research in professional medical journals.

She is fluent in Spanish.

Dr. Ritvo is certified in cardiovascular disease by the American Board of Internal Medicine. She is an affiliate-in-training of the American College of Cardiology.

Central Maine Heart Associates provides patient care from offices at 60 High Street, Lewiston. The practice is also comprised of Robert Bender, D.O., Alan B. Langburd, M.D., Mark E. Lanzieri, M.D., Patrick J. Lawrence, M.D., Michael Lemieux, M.D., William J. Phillips, M.D., and Daniel A. Soroff, M.D. The practice can be reached at 753-3900.

CMMC earns advanced accreditation from Society of Chest Pain Centers

Maine's only approved Chest Pain Center gains "Accredited with PCI" status

CHEST PAIN RESPONSE – William Phillips, M.D., (on left) medical director of cardiology at the Central Maine Heart and Vascular Institute, was one of the key players in Central Maine Medical Center's successful bid to gain advanced accreditation for its Chest Pain Center.

The Central Maine Medical Center Chest Pain Center has been granted advanced accreditation by the Society of Chest Pain Centers.

CMMC's Chest Pain Center has earned "Accredited with PCI" status, an advanced level of accreditation also referred to as "second tier accreditation."

In 2005 the CMMC Chest Pain Center was the first Maine chest pain center to achieve Society of Chest Pain Centers (SCPC) accreditation when it earned first tier accreditation. It remains the only heart attack program in Maine to hold SCPC accreditation of any kind.

The CMMC Chest Pain Center earned "with PCI" status because it offers percutaneous coronary intervention, also known as coronary angioplasty. PCI is among the most advanced treatments available to open blocked arteries in the heart, thereby preventing or treating a heart attack.

"We are the first and only accredited heart attack center in Maine," says Susan Horton, executive director of the Central Maine Heart and Vascular Institute. "Chest pain accreditation is the 'Good Housekeeping Seal' for heart attack centers. The accreditation team has told us we have one of the best systems they've ever seen."

Heart attacks are the leading cause of death in the United States and in Maine. In 2000 some 30,000 Maine hospital days were consumed by patient care related to heart attacks at a cost of $437 million. Maine ranks 27 nationally and first in New England for age-adjusted heart disease.

"The chest pain center concept seeks to minimize death and disability caused by heart attacks by accelerating their diagnosis and treatment," explains Lanny Oliver, M.D., medical director of CMMC's Emergency Department. "CMMC's program has achieved exceptional results due to its streamlined system that extends from the cardiac catheterization laboratory to the CMMC Emergency Department to EMS providers in the field.

Kevin M. Kendall, M.D., director of Emergency Medical Services at CMMC, says "CMMC's goal is to have a 12-lead EKG assessment of a possible heart attack patient done in less than five minutes and reviewed by a physician within another five minutes."

Kendall spearheaded the development of the medical center's catheterization lab field activation program that reduces diagnosis and treatment times by mobilizing the interventional cardiologist and catheterization lab personnel even before the patient arrives at the hospital – thus improving "door-to-balloon times" for patients who are having a heart attack.

"Door-to-balloon time" is the time from when a patient arrives at a hospital until the blood vessel causing the heart attack is reopened. It is the standard by which patient outcomes and cardiac center success is measured. Studies clearly show that the faster a heart attack patient is provided "definitive treatment," the better his or her chances for survival and a full recovery.

Over the past few years, Kendall has helped 14 regional EMS services implement field activation systems.

"The emergency medical system works collaboratively with the interventional cardiology team." says William Phillips, M.D., medical director of cardiology at CMHVI. "A first rate heart attack care program requires the ability and availability of a cath lab team that is willing and able to rush to the hospital during all hours in all weather to save a life. Their care, compassion and concern truly make a difference every day."

The Society of Chest Pain Centers accreditation process reviews the total cardiac care capabilities of the hospitals it evaluates, but focuses on eight key areas of competency:

- integrating the emergency department with the local emergency medical system
- assessing, diagnosing, and treating patients quickly
- effectively treating patients with low risk for acute coronary syndrome and no assignable cause for their symptoms
- continually seeking to improve processes and procedures
- ensuring chest pain center personnel competency and training
- maintaining organizational structure and commitment
- having a functional design that promotes optimal patient care
- supporting community outreach programs that educate the public to promptly seek medical care if they display symptoms of a possible heart attack

"The accreditation process reviews the total program we support," says Peggy McRae, R.N., director of Emergency and Critical Care Services at CMMC. "They looked at key items that are mission critical; from how fast we open a blocked artery to support process activities like data management and analysis. They looked at our internal quality review processes as well as our community education outreach programs. They reviewed everything and our program received high marks. We are pleased to provide such high quality care for those who experience heart attacks."

Central Maine Healthcare President and CEO Peter E. Chalke says the accreditation is the capstone to an initiative directed by the governing boards of Central Maine Medical Center and Central Maine Healthcare.

"A number of years ago the boards resolved that we would develop an advanced cardiac surgery and angioplasty service that would deliver on the promise: 'quality care close to home.' This second-tier accreditation is an objective assessment showing that we are meeting and perhaps even exceeding this commitment," Chalke says.

For more information about the CMMC Chest Pain Center, call Peggy McRae at 795-2217.

Central Maine Heart and Vascular Institute names new cardiothoracic chief

Joseph M. McClain, M.D., has been named chief of cardiothoracic surgery at the Central Maine Heart and Vascular Institute in Lewiston.

Dr. McClain comes to CMHVI from Richmond, Va., where he was on staff at both The McGuire Veterans Affairs Medical Center and the Virginia Commonwealth University Health System, Medical College of Virginia Campus. He was also on staff at Duke University Medical Center.

He was a lieutenant colonel in the U.S. Army Medical Corps and served as chief of thoracic and vascular surgery at the 10th Combat Support Hospital in Baghdad, Iraq, from September 2005 to May 2006. Partly as a result of his work in Iraq at what has been described as "the busiest trauma hospital in the world", Dr. McClain has extraordinary surgical experience.

Dr. McClain graduated with honors from Tarkio College in Tarkio, Mo., and earned a master's degree in physiology and biophysics from the University of Nebraska Medical Center in Omaha, Neb. He earned his medical degree from the University of Nebraska Medical Center, graduating with distinction. He also served as a Sarnoff Cardiovascular Research Fellow at The Pennsylvania State University College of Medicine-Milton S. Hershey Medical Center in Hershey, Pa.

Dr. McClain completed a surgical internship at Walter Reed Army Medical Center in Washington, D.C., and served general surgery and cardiothoracic surgery residencies at Brooke Army Medical Center in San Antonio, Texas.

He is certified by the American Board of Surgery and the American Board of Thoracic Surgery.

Dr. McClain is interested in all aspects of cardiothoracic surgery, but has a keen interest in off-pump beating heart surgery, heart failure surgery, and valvular heart surgery.

The Central Maine Heart and Vascular Institute, a clinical division of Central Maine Medical Center, is a full-service cardiothoracic surgery service located at 60 High Street in Lewiston. The office can be reached at 795-8200.

Coronary Artery Disease and the French-Canadian Connection

BY MICHAEL C. LEMIEUX, M.D., F.A.C.C.

Coronary artery disease is a major cause of death in the French-Canadian population. Many studies have documented known defects in the LPL gene that are quite prevalent among French-Canadians.

Studies have also been done in identifying chromosome 8p locus for early onset coronary heart disease in the French-Canadian population. A locus on chromosome 10, which influences C-reactive protein levels, has also been confirmed in 120 French-Canadian families diagnosed with hypertension, providing targets of the identification of genes involved in the regulation of hs-CRP and the development and progression of vascular disease.

Apo A-l (E136X) is a cause of HDL-C deficiency in the French-Canadian population and is associated with premature coronary artery disease. In addition to these genetic defects, we as French-Canadians have struggled with our less than desirable diet. I remember years of toast with creton (pork-based cold spread high in fat), minute steaks dripping with butter, bread soaked in butter left over in the frying pan, crepes with real maple syrup, blood sausage links drenched in grease, and every dish served with fat-based sauces and gravies.

Coronary heart disease and its clinical manifestation of myocardial infarction is widely recognized to be a mulitfactorial disorder, with contributions from both environmental and genetic factors. The development of hypertension and diabetes, both of which also have environmental and genetic components, is strongly associated with increased coronary heart disease risks. Increasing age and male gender are strongly associated with coronary artery disease risks, with men typically developing clinically important disease 10 to 15 years before women who in general are protected to a degree until after menopause.

Of the environmental factors, smoking is the major contributor and is associated with a roughly two-fold higher lifetime risk of coronary artery disease. Lack of exercise and associated adiposity, high intake of saturated fats, and low intake of certain vitamins are all associated with increased risk of coronary artery disease. The mechanism of action of these factors is thought, in part, to be through determining differences in the plasma levels of lipids and lipoproteins that are atherogenic. High levels of LDL cholesterol and low levels of HDL lipoprotein cholesterol have consistently been shown to be associated with coronary heart disease risk.

Evidence of the strong genetic component for coronary heart disease risk is supported by the consistent association between a reported family history of early CAD and a personal increased risk, with a risk associated with family history being in the order of 1.7-fold higher even after adjusting for other classical risk factors.

It is important for all of us Franco-Americans to be very diligent in trying to reduce our risk factors. Prevention is key, and I encourage all of you to work with your local doctors to help you reduce your risk factors.

Cardiologist Michael C. Lemieux, M.D., F.A.C.C., practices with Central Maine Heart Associates in Lewiston and Oakland. The offices can be reached at 753-3900 and 861-5880, respectively.

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