Medical Milestones

Lifesaving Breakthrough In Stopping Heart Attack Celebrates Milestone

(NAPSA)—This year celebrates the 30th anniversary of a medical breakthrough that has saved the lives of millions of heart attack victims and enabled heart attack survivors to enjoy more normal lives.

It was 30 years ago that Dr. Andreas Gruentzig used a small tube with a tiny balloon on the end, called a balloon-catheter, to open his patient's blocked heart artery.

The procedure, called angioplasty, restored normal blood flow to the heart, relieved the 38-year-old patient's chest pain and likely prevented a heart attack. Before angioplasty, survivors of heart attacks often faced life-long disability and physical restriction.

This year, cardiologists from around the world are celebrating angioplasty's 30 years of progress in stopping heart attacks and treating coronary artery disease. They are also looking ahead to new frontiers, including the promise of angioplasty and stent placement to stop stroke, America's third-largest killer and the leading cause of serious disability.

"Thirty years ago, one in four heart attack victims died," said Bonnie Weiner, M.D., president of The Society for Cardiovascular Angiography and Interventions (SCAI) and professor of medicine and interim chair of cardiovascular medicine at St. Vincent Hospital at Worcester Medical Center in Worcester, Mass. "Today, more than 95 percent survive. And it's very typical for heart attack survivors to return to work and normal activities just a few days after angioplasty."

"Although heart disease continues to be the number one killer in the U.S., the success and progress of angioplasty is one of modern medicine's most inspiring stories," says Steven Bailey, M.D., SCAI secretary and interim chief of the Division of Cardiology, professor of medicine at the University of Texas Health Sciences Center at San Antonio.

The discovery that balloon catheters could serve as tools for delivering medical therapies to arteries launched a new era of "interventional cardiology." Until then, emergency coronary artery bypass graft surgery (CABG) and clot-busting drugs were the only interventions to stop heart attacks and treat coronary artery disease.

Angioplasty, which is frequently accompanied by stent implantation, is a minimally invasive procedure that requires no general anesthesia. Steady advances in the techniques and tools of angioplasty have made the procedure a treatment option for more patients. In the early years, an estimated five to 10 percent of patients with heart disease were candidates for angioplasty, and it was successful just 65 percent of the time.

Today, approximately two-thirds of patients with coronary artery disease are candidates for angioplasty, stenting and other catheter-based treatments. The treatments are successful in 98 percent of patients, and major complications occur in only 1.5 percent of cases. Just one patient in 1,000 needs emergency bypass surgery.

Refinements in catheters and balloons have been continuous. But dramatically improved patient outcomes are attributed to two other major advancements:

• The bare metal stent, approved by the U.S. Food and Drug Administration in 1994, was designed to address the problem of sudden collapse of an artery following angioplasty. Stents overcame this problem by propping the artery open and restoring normal blood flow.

• The drug-eluting or coated stent, first approved in the U.S. in 2003 and designed to release medication over time to interrupt the biologic processes that cause tissue growth and re-narrowing inside the stent, has reduced the incidence of tissue build-up from 40 percent in the early days to just five to seven percent today.

Looking ahead, angioplasty's catheter-based procedures and tools offer exciting potential for treating other serious health issues effectively—and less invasively.

One of the most exciting areas of development is the treatment of diseased carotid arteries, the vessels that supply blood to the brain, to stop or prevent stroke.

Catheter-based procedures are also being used to treat renal arteries that supply blood to the kidneys and arteries that provide oxygen- and nutrient-rich blood to the legs and feet.

Even newer devices are being delivered via catheter to close a small, naturally occurring hole between the upper left and right chambers of the heart that puts some patients at a higher risk of stroke.

The Society for Cardiovascular Angiography and Interventions is a 3,800-member professional medical society whose mission is to promote excellence in invasive and interventional cardiovascular medicine. SCAI has undertaken this public education initiative with its own resources as well as support from Abbott Vascular, Boston Scientific Corporation, Cordis Corporation, and Medtronic CardioVascular. The Society gratefully acknowledges this support while taking sole responsibility for the accuracy and medical integrity of all content developed and disseminated through this effort.