HEALTH News & Notes

A "Seatbelt" For A Common Medical Procedure

(NAPSA)—Each year, half a million people in the United States have coronary bypass graft surgery[1] to repair blockages inside arteries that supply blood to the heart. However, within the first 10 years, 40 percent of patients will need to have their bypass graft repaired due to re-clogging[2]. Among those patients who require this repair, the risks associated with the procedure can be reduced by more than 40 percent[3] with a new technology called embolic protection. In fact, embolic protection is so effective at reducing the risk of repairing bypass grafts, that a growing number of physicians believe it should be the standard of care.

"When we perform a bypass, we typically use a section of vein from the patient's leg to replace the clogged artery on the heart," said Dr. Jeffrey Chambers, an interventional cardiologist at Mercy Hospital in Minneapolis. "While this technique usually works very well, the new graft is fairly fragile and in time, can clog up again."

Instead of doing another bypass surgery, most doctors choose to perform a less invasive procedure called angioplasty. During an angioplasty, doctors carefully thread a catheter (a thin, flexible tube) with a small balloon attached, through the artery to the location of the blockage.

When the balloon reaches the blockage, it is inflated to flatten fatty deposits, called plaque, and reopen the artery's pathway. A doctor may also insert a small wire mesh cage, called a stent, to help keep the passage propped open.

However, the procedure is not without risk. Almost 17 percent of patients having an angioplasty to repair a graft will experience serious complications up to 30 days after the procedure[4].

During an angioplasty, small pieces of plaque composed of calcium deposits, cholesterol and possibly blood clots can break loose or embolize, and flow downstream toward the heart. This debris can accumulate and form a second blockage and again deprive the heart of needed oxygen, potentially causing a heart attack.

"Tiny pieces of debris can add up to huge problems for a patient," said Dr. Chambers.

One device, the Medtronic AVE GuardWire Temporary Occlusion and Aspiration System, has been approved by the U.S. Food and Drug Administration to provide "embolic protection" during an angioplasty to capture and remove debris before it can cause any harm.

With the GuardWire System, a physician begins the angioplasty by first threading a very thin wire with a balloon on its tip through a catheter that is inside the vessel. The wire is about the diameter of pencil lead. When inflated, the balloon, which is downstream from the blockage, acts as a dam to stop the flow of debris toward the heart.

Once the physician has finished the angioplasty, the blood and trapped debris are safely aspirated from the artery. "This device allows us to go in and vacuum up the debris," said Dr. Chambers. "Using embolic protection during an angioplasty is like wearing a seatbelt while driving—it's proven to be safer, so why wouldn't you use it?"

Last year, nearly two million angioplasties were performed worldwide, making angioplasty the most common medical intervention in the world. The GuardWire System is currently approved by the FDA for use during angioplasties to repair bypass grafts, and it is also being studied for use during angioplasties in people who are experiencing heart attacks but have not had bypass surgery.

"It just made me feel safer," said Denny Forsyth, a patient of Dr. Chambers who benefited from the GuardWire System during a recent emergency angioplasty at Mercy Hospital. "When Dr. Chambers explained that he would be able to remove the debris before it could cause a problem, I told him, 'makes sense to me—go for it!'"

For more information about the GuardWire System, consult your physician or visit: www.medtronicave.com.

1. Mayo Clinic Health Letter, June 21, 2002
2. Ibid
3. SAFER Trial data
4. Ibid