

Melrose-Wakefield angioplasty unit saves lives

Tom McNall was at home in Melrose the Friday of the Memorial Day weekend. He was remodeling a bathroom. Then, without warning, something happened inside his chest.

"I was putting something away kind of in an odd position and I sneezed," said the 42-year-old Melrose resident. "It felt like someone had punched me in the neck."

He felt dizzy. He sat down. He tried stretching and taking deep breaths. Things just got progressively worse.

When one of his arms went numb, he decided to call 911.

McNall was having a heart attack, but he didn't know it yet.

If not for Melrose-Wakefield Hospital's angioplasty program, established just five months earlier, McNall could have lain in that ambulance for hours longer, crawling through holiday weekend traffic on his way into Boston for emergency treatment at a larger hospital.

In McNall's case, doctors in Melrose-Wakefield Hospital's angioplasty department expanded the artery that was blocked close to his heart. They used a tiny balloon, run up inside the artery, to expand it and free the clot that had stopped the blood flow. They kept the artery open by leaving behind a metal stent in the blood vessel wall. McNall was up and out of the hospital the next day.

Last January, the hospital celebrated the one-year anniversary of its angioplasty program, the only such hospital program in 16 surrounding communities. Over the past year, in a state-of-the-art catheterization lab installed Jan. 20, 2004, the hospital's cardiology team has treated 30 patients. So far, their success rate is 100 percent, according to hospital records.

"It's a way of fixing an artery in the middle of a heart attack, to abort the heart attack," said Dr. Carl Turissini, director of the program. "We bring you right down to the cath lab and we abort the heart attack."

The whole process takes about one to two hours, Turissini said.



Members of the cardiology team at Melrose-Wakefield Hospital: from left front, Dr. Salil Midha, Dr. Carl Turissini, Dr. Bruce Watrous, Dr. David Criss, (back) Dr. Laurence Conway and Dr. Khether Raby.



Dr. Carl Turissini, director of angioplasty service, performs a procedure in the new cardiac catheterization and angioplasty laboratory at Melrose-Wakefield Hospital.

The angioplasty process used at Melrose-Wakefield is the latest in an evolution that has seen ever-improving results.

Literally "artery fixing," angioplasty began in 1979 with a process in which a tube attached to a balloon would be run up the artery to a point where blockage had caused a heart attack — hence, "catheterization." There, the balloons expanded, widening the artery and allowing blood flow to push free the offending cholesterol build-up and blood clot.

It was more effective and faster than thrombolytics, the blood clot-dissolving drug therapy doctors had used in earlier cases. One in three patients suffered arterial scar tissue after thrombolytics, and had to go back into the cath lab within six months.

In 1994, doctors began using stents — stainless-steel tubes mounted on the artery-expanding balloons. They are left behind after the operation is complete, permanently enlarging the artery at the point where the blockage occurred. After two months, the stent becomes part of the artery wall.

The stents were an improvement: Only one in six patients suffered scar tissue around an implanted stent. When drug-coated stents premiered in 2003, only one in 20 patients wound up with scarring in their affected arteries.

The relatively new lab at Melrose-Wakefield hospital, Turissini said, means a better chance that a stent can save a life.

"What we always look at is door-to-balloon time," he said. Most studies say

that figure must be under two hours in order for angioplasty to be more effective than thrombolytics. According to Turissini, when the hospital used to transfer patients to an angioplasty department at a Boston hospital, the best-ever door-to-balloon time was three hours, 30 minutes.

Now, at Melrose-Wakefield, the door-to-balloon time is averaging 87 minutes, the hospital reports. But the actual time from the start of a heart attack to when it is treated may vary, depending on how long the patient waited before checking into the hospital.

One of Turissini's patients waited two hours before deciding it was time to head to the hospital. Once they got him into the cath lab, he went into cardiac arrest: His heart stopped beating. Assisting nurses did CPR for five minutes before cardiologists were able to stabilize him using a pacemaker wire that kept his heart beating regularly. During the process, they used a cardiac defibrillator more than 30 times to shock the patient's heart back into rhythm, Turissini said.

But once the balloon and stent opened the artery, the patient's blood pressure returned to normal almost immediately, Turissini said.

"He wouldn't be alive today if we didn't have this program," Turissini said. "In the 30 patients we've treated, we lowered their mortality rate. But I'm not sure which ones I saved. I'm sure about this one. This is the type of guy who probably would have died in the ambulance," if he had to be transported to another hospital for angioplasty.

For McNall, it's easy to think about what could have happened if he had waited. When the chest pain came on, last Memorial Day, he was tempted to shrug it off as a pulled muscle. The day before the heart attack, he had run 3 1/2 miles, he said. He cross-country skis, hikes, swims and generally eats well. He's only 42.

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